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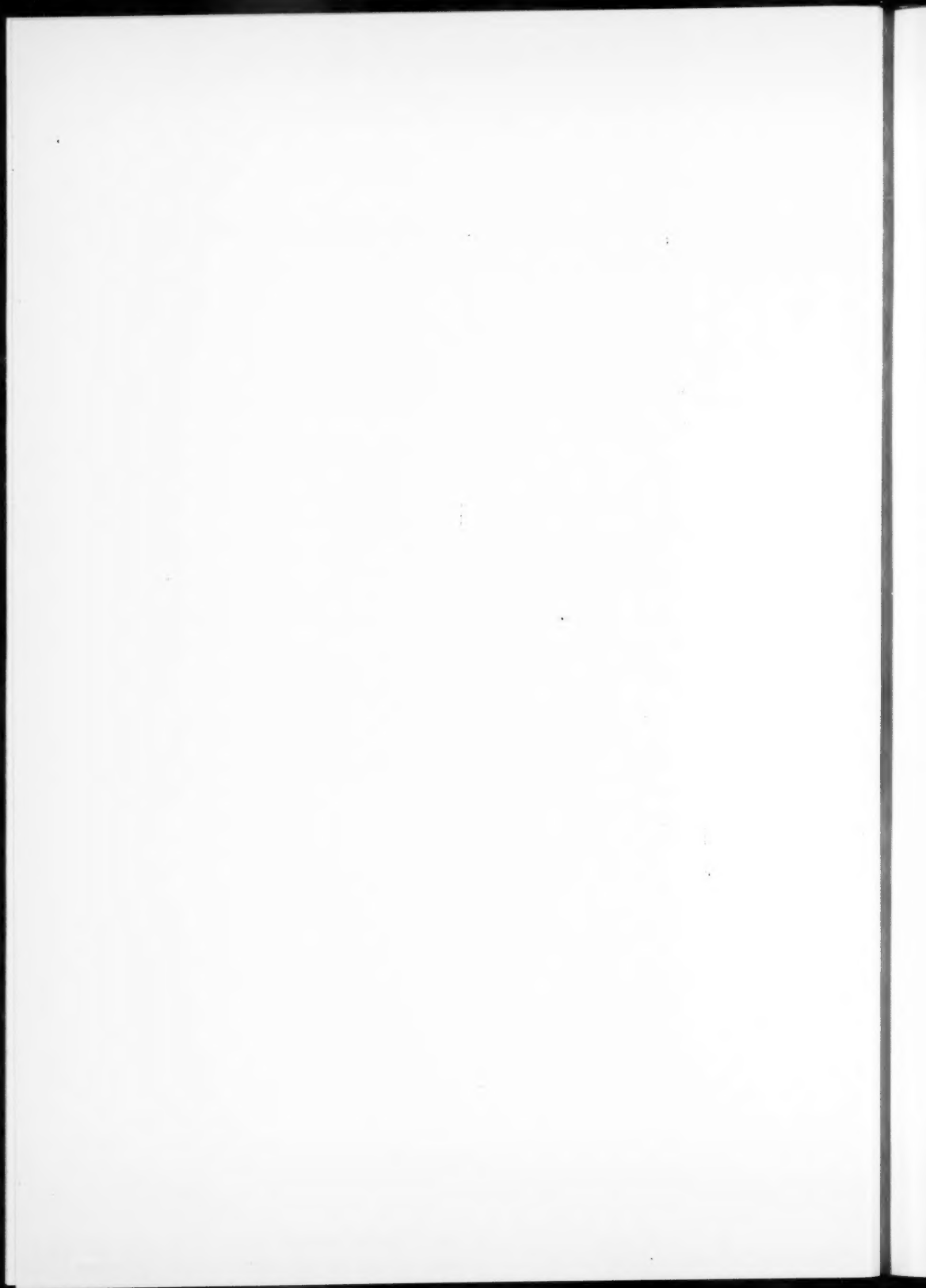
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PSYCHOSOMATICS

OFFICIAL PUBLICATION
OF THE
ACADEMY
OF
PSYCHOSOMATIC
MEDICINE

A
JOURNAL
EXPLORING
THE ROLE OF
PSYCHIATRY
IN THE
DAILY
PRACTICE
OF
TOTAL
MEDICINE



PSYCHOSOMATICS

Official Journal of The Academy of Psychosomatic Medicine

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Stanley Kaish, M.B.A.

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Editorial

Since this is the launching of *Psychosomatics*, the Journal of the Academy of Psychosomatic Medicine, a few remarks are in order.

The goals of *Psychosomatics* are identical with those of the Academy—to aid the physician in his treatment of the “total” patient. The general practitioner and specialists in every field of medical endeavor, will find a common meeting ground in *Psychosomatics*. Psychiatry and medicine, too long separated because of language difficulties and other communication problems, will seek a compatible integration within these pages.

One of the most pressing problems in medical education today, especially at the post-graduate level, is the need for the physician to understand better and deal more effectively with the emotional problems of his patients. Not only is it important for the nonpsychiatrist to cope with these difficulties; it is equally necessary that he learn to recognize his limitations. Our goal is not to make more amateur psychiatrists—these are plentiful enough—but to help produce better doctors.

The Journal will contain original articles

presented at the annual meeting of the Academy and will report on the various interdisciplinary panels and symposia held there. Its pages will also be open to manuscripts submitted to the Editorial Board for consideration. Abstracts and reviews of the literature in the field will keep you abreast of newer developments. Other features will include “Notes and Comments” and “Letters to the Editor.” It is this latter department which can serve as a means of inter-communication, where ideas, suggestions, clinical notes and free associations, perhaps too fragmentary for a formal paper, can find expression and perhaps stimulate response in others. It is the editor's hope that this department will serve as a catalyst, so that some of these thoughts can be helped to blossom to maturity.

Silence on your part is probably the severest criticism you can offer. Since the purpose of the Journal is to meet your requirements, it is your privilege and duty, as well as our need that you express them. Only then can a new journal justify its existence in this era where medical journals multiply like guinea pigs while doctors find less and less of the material they need.

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INFORMATION FOR CONTRIBUTORS

While *Psychosomatics* is the official journal of the Academy of Psychosomatic Medicine, its pages are open to all authors interested in the concept of total medicine. Original papers, book reviews, abstracts, letters: all will be considered by the editors for publication. Criteria for publication are scientific merit, interest, timeliness, and pertinence to the role of psychiatry in the daily practice of medicine.

Manuscripts

The original manuscripts of papers read at the annual meetings of the Academy should be left in the Press Room during the meetings, or sent to the Editor promptly afterward. Do not deposit carbon copies.

Papers read at the annual meetings become the property of the Academy. Not all papers read, however, can be published, and authors wishing to publish in other vehicles will first secure from the Editor the release of their manuscripts.

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1. Rosen, H.: *Am. J. Psychiat.*, 107:917, June 1957.
2. Gesell, A., and Ilg, F. L.: *The Child from Five to Ten*. New York: Harper & Bros., 1946.

Abbreviations should conform to the style used in the Quarterly Cumulative Index Medicus.

* * *

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PSYCHOSOMATICS

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JANUARY - FEBRUARY 1960

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relieve depression and depression-induced anxiety

the common problems
basically unresponsive to
tranquilizers

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PSYCHOSOMATICS

Official Journal of The Academy of Psychosomatic Medicine

Psychiatry and Medicine — Can They Be Better Integrated?

WILFRED DORFMAN, M.D.

Apparently psychiatry has finally infiltrated into general medicine. It now has the official acceptance that Plato predicted for it back in 450 B.C. He noted the low cure rate seen in many of his fellow Greeks and related it to the most obvious fact that many of the local *medicos separated mind and body* and were not practising comprehensive psychosomatic medicine. Relatively recent events indicate that this was no idle dialogue, but true Platonic wisdom. The increase in medical specialization, an inevitable and advantageous event when one considers the many advances, has carried with it a quite predictable increase in sharpness of focus on the somatic symptom or involved organ. Unfortunately, in many instances, this has led to a decrease in attention to the total person. It is like a microscope; the more one concentrates on the details seen through the high powered lens, the less one sees of the rest of the field.

The cardiologist, as his specialized knowledge increases, becomes more and more cognizant of minor deviations in the electrocardiogram. This is good, but his growing preoccupation with minor ST deviations, slight almost perceptible sags in the T waves, or minimal changes in the QT interval, may result in his losing sight of the owner of these variations. This is especially evident when slight changes are interpreted as "possible disease," rather than as a clear cut "yes" or "no." Iatrogenic cardiac neuroses are readily produced in this manner and are notoriously difficult to treat, just as neuroses in animals

can be experimentally produced by ambiguous stimuli and are similarly difficult to treat.

The gastro-enterologist, as his refer practice grows, may begin to see only a column of barium with an opening at two ends. His increasing attention to the details of fluoroscopy and roentgenography may rapidly result in his becoming an expert in intestinal photography. The danger here, as with the cardiologist, lies in his spending less and less time with the non-barium filled areas of his patient (especially the uncharted areas concerned with feelings, attitudes and behavior into which the barium cannot penetrate). So it is with the gynecologist, the allergist, the orthopedist, the endocrinologist, the metabolic expert, and all the other medical and surgical specialists, including the psychiatrist, who too may lose contact with the total person. If he is a pure psychoanalyst, he can easily rationalize that it is dangerous to examine patients—since there is no telling when this will be interpreted or misinterpreted as a sexual attack. This reasoning is not necessarily faulty, when one considers the delicate and most personal nature of the patient-doctor relationship in this type of therapy, but the psychoanalyst must nevertheless remain constantly alert to the obvious fact that his patient has no natural or acquired immunity to organic disease. If the therapist's orientation is such that he cannot or will not examine the patient himself, he must arrange for one of his medical colleagues to do so. Medical evaluation is essential prior to the onset of any type of psychotherapy, and must be repeated when the indication arises, since all symptoms are not necessarily produced solely and exclusively by emotional factors. Constant vigilance is necessary, so that patients with brain tumors who prove "resistant" to psychoanalysis are given

From the Dept. of Psychiatry, State Univ. College of Medicine, Brooklyn, N. Y., and the Depts. of Medicine and Psychiatry, Maimonides Hospital of Brooklyn, N. Y.

Presented at the Sixth Annual Meeting of the Academy of Psychosomatic Medicine at Cleveland, Ohio.

an opportunity for early neurosurgical intervention, and patients with organic disease and somatopsychic symptoms remain under proper medical attention. But every patient with fluctuating hypertension and recurrent anxiety is not necessarily secretly harboring an adrenal pheochromocytoma, nor is spontaneous hypoglycemia always caused by an islet cell tumor of the pancreas. The medical workup and the subsequent surgery, or the subsequent psychotherapy, so necessary in one patient, is obviously fruitless for another.

To many pure psychoanalysts, the new tranquilizers may seem contraindicated because they may remove anxiety too quickly, before the patient has had a chance to "work it through." Valid though this concept may be, since excessive tranquility is hardly an indication for a prolonged sojourn on the analyst's couch, some of these newer tranquilizers have nevertheless demonstrated their merit. In many instances, the proper and timely use of these drugs can hasten the process of psychotherapy and not delay it, since a patient who is less anxious can often communicate better and therefore stands a better chance of "being reached" sooner by the therapist. There are, nevertheless, dangers in providing only symptomatic relief, since it may deprive the patient of the most necessary orientation to the fact that his symptoms are psychogenically induced and therefore require psychotherapy rather than magic. These opposing points of view seem contradictory, but are capable of reconciliation when the doctor thinks in terms of the individual patient and his individual needs rather than in abstract theoretical terms, for it is readily apparent that what is good for one is not always beneficial to another. Perhaps the advent of these new drugs in this new era of psychopharmacology, and the concomitant and consistent advances in biochemistry, neurophysiology and psychodynamic understanding will eventually add light rather than heat to this dilemma. It should be recalled, however, for the sake of the record, that Freud himself stated that the "man with the syringe" was close behind at the analyst's heels and would some day overtake him. Provocative though this prediction may be, it is still decidedly over-optimistic, and does not warrant the abandonment of the basic concept of psychodynamics. Freud's findings not only removed the iron curtain that opened the

door to the unconscious, but are at the very roots of the patient-doctor relationship. No drug can substitute for the doctor nor can the therapeutic power of the doctor-patient relationship ever be replaced by it. There will always be a need for the doctor to understand the emotional needs and conflicts of his patient; this understanding cannot be boiled down to a structural formula, no matter how the chemists alter the benzene ring. Nevertheless, there is a parallel need for a constant re-evaluation of the constructs and hypotheses of psychoanalytic theory, just as there is with other branches of medicine and science. When new facts and correlations become proven, they must replace those outmoded. Freud himself constantly re-evaluated his earlier theories and abandoned those which he found inadequate. Science demands this objectivity, in order to advance.

One of the areas of persistent ambiguity in this era of changing perspectives in the management of emotional illness, is the question of "short-term" psychotherapy. Classical analytic theory can only rarely accept abbreviated therapy as possible and practicable. Yet, in many instances, in carefully selected patients, substantial results can be obtained in relatively few therapeutic sessions. It all depends on one's goals and what one calls substantial. When both patient and therapist are well motivated and geared for further exploration, and the patient has the potentialities for further emotional growth and insight, there is no question but that it must take considerable time to work through deep resistances and defenses to produce discernible results. Long-term analytically oriented psychotherapy and/or psychoanalysis have produced these fine results in many patients. In others, however, a distinct lack of growth and crippling emotional illness have persisted despite prolonged therapy by well-trained, card carrying analysts. To label all these failures as "resistance" on the part of the patient is a self-sealing manoeuvre, a protective device which seals analytic theory and practice from the benefits of careful scientific scrutiny.

To some analysts, any departure from classical long term therapy that is accompanied by a loss of symptoms in too short a period of time is considered to be a "flight into health." They apparently feel that the "quick

cure" precedes and precludes the acquisition of insight which theoretically (at least) prevents recurrences. Nevertheless, many patients do recover without insight; in fact some of the best results are seen in patients who get better without knowing why or how it happened. Psychotherapy is valuable, provided it is geared to meet the patient's needs, but precipitous insight, forced upon someone who is not ready for it, or cannot accept it, can be dangerous. It can crush a faltering, shaky ego structure and result in a psychotic break. In some, the use of drugs, environmental manipulation and simple reassurance are indeed preferable to deep exploration and reconstructive therapy. Here again there is a vital need to examine the individual rather than the theory.

Perhaps an example will help clarify this concept:

A 32 year old female was referred by a psychoanalyst because he was about to leave on his vacation. She had delivered her second child some six weeks previously, and promptly became severely depressed. At the first interview she was indeed difficult to reach, but within two or three sessions and with the aid of Deprol she seemed sufficiently improved so that the immediate need for electroshock therapy could be put aside. Her main problem centered on the fact that she had moved to a new apartment which was not within walking distance of her mother's home. She felt highly inadequate; she was convinced she could not cope with the two children without the aid of her "most helpful and devoted" mother. The patient constantly pointed out that she "should be able to do it without her." She also felt that her mother needed this type of occupational therapy to keep her busy. Since it is often difficult to decide who is more dependent upon whom, it was suggested that she consider the possibility of returning temporarily to her mother, with her husband and two children. It was pointed out that it was no disgrace for anyone to be dependent; that all of us are dependent upon others, especially so in times of stress. She finally made "her own decision" and returned to mama. Within two weeks she lost her depression. She was now able to eat, sleep and once again function as a mother and wife. All three—grandma, mama and baby—were improved. Even her husband looked better, and the older, four year old, without therapy apparently became more reasonable in his demands. The patient was maintained on Deprol and weekly psychotherapy. After an additional three weeks she once again became fretful, and

fearful, convinced that her depressed feelings would return once she went back to her own home. She was reassured and it was suggested (mildly without authoritativeness) that perhaps she might spend a day at home, with her own family; that it would not be catastrophic if the situation demanded that she return again to her mother's home. The following Sunday she tried it. She went to her own home, apparently liked it and stayed. After two additional sessions, she was well enough to call to cancel her appointment and stop the Deprol. She has apparently been well ever since. (Both the patient and her husband have maintained some telephone contact.) With the waning of the long summer, the analyst returned and called to inquire as to his patient's progress. When told she was well and seemed to have no motivation nor need for further therapy at this time, he was convinced that this was a "flight into health."

When is a "flight into health" healthy and when is it not? To help clarify this concept for the non-psychiatrist, it might be helpful to borrow an example from the field of general medicine. From the point of view of the generalist, internist or cardiologist, a patient with an acute myocardial infarction is usually kept in bed or a chair for four to six weeks, and after a reasonable period of convalescence returns to resume some of his former activities within a few months. He was "cured" in that he recovered from his acute coronary occlusion, but it was well understood (at least by his physician) that his genetic and metabolic pattern was not corrected by this experience, and that his coronary arteriosclerosis was still "resistant" and quite "unresolved." It was also fully realized that there would be a possibility of recurrence, especially if the patient was unfortunate enough to develop an obstructing arteriosclerotic plaque at a strategic spot in a major coronary blood vessel, or if some of the contributing factors to his first attack, such as marked overweight, hypercholesterolemia, hypertension, occupational or other stress were not corrected. Whether due to a fear of recurrence and an adaptive change in attitudes, feelings and behavior, or because of the fortuitous location of the arteriosclerotic plaques, many patients with well documented myocardial infarctions have managed to stay alive for many years. They have had an acceptable flight into health.

But let us suppose that our patient follows a different course. If he sinks into a post-

coronary depression, and is unable to resume his life and activities, despite the stabilization of his EKG, what then? If his coronary occlusion mobilized long dormant dependency needs; if he persists in maintaining a horizontal position and acquires adhesions to both the mattress and the bed; if he is now unconsciously, or consciously, using his illness as a means of punishing himself or others—it then becomes necessary to evaluate the state of his feelings in addition to the state of his T waves. Thus he may have a well stabilized EKG, blood count and sedimentation rate and is "cured" as far as his infarct is concerned, yet remain totally or partially incapacitated. If psychiatric referral is accomplished and an attempt is then made to get to the roots of this now non-organic disability, the patient may quite suddenly, after the briefest of psychiatric exposure, state that he is perfectly well and no longer needs psychiatric advice, guidance or treatment. He too experiences a "flight into health" which may indeed be easier for him to face than suffer the pangs of self-exposure through further exploration of his feelings. Is he cured? To the casual observer he may appear quite well, since he has now returned to work and states (often quite vehemently) that he is finished with doctors, cardiologists and psychiatrists. But to his discerning wife, his children, business associate, or to his close friend, he is no longer the same person. He is preoccupied, sleepless, sexless, and is overconcerned with each minor somatic twinge in the chest area, ever fearful that his life will suddenly be snuffed out. He too has had a "flight into health"; statistically he has been cured of his myocardial infarct, but how about the quality of the cure? It certainly leaves much to be desired, but can psychotherapy be forced upon him? Or is he better off without deep insight? Perhaps he could be reached if the nature of the therapy (psychotherapy, ECT or drugs) was geared to fit his needs—if it was purely reparative in nature rather than reconstructive in its goals.

One of the cues to the core of the problem of evaluating the scope and depth of the "cure" lies in the difference in goals of different physicians. No two physicians, whether they are g.p.'s, internists, cardiologists or psychiatrists, will react precisely the same way to the same patient, since each sees only what he looks for. The same physician may even

see that matters are quite different in the same patient after repeated exposure. All of this may be vaguely reminiscent of the old axiom that "no two women are ever alike, and the same one is rarely alike twice"—and so it is with patients and doctors. All of us have blind spots, whether we are conscious of them or not and whether we are analysts or not. The size of the scotoma has individual variations to be sure; some scotoma may scintillate quite brightly and still be large enough to produce a good sized blind spot.

Limitations

In some patients, especially those with somatic complaints and/or disease, the physician practicing "total" medicine may eventually reach an impasse. Patients with severe obesity, ulcerative colitis, bronchial asthma, cardiac symptoms, pylorospasm, hypertension, dysmenorrhea, sterility and other psychosomatic states, may need their somatic symptoms as a protective wall of defense. If these are removed precipitously by too rapid penetration, especially when this is done without concomitant skilled handling of their psychic vulnerability, a serious emotional state may ensue. Thus a patient whose weight is reduced in an attempt to meet the perfectionistic standards set by the height-weight tables of the insurance companies, may lose much of the excess flesh and succeed in obtaining a greater life expectancy, yet develop a depression which is precipitated by severe deprivation of the basic oral needs to be fed. Perhaps he will actually live longer; at any rate it will certainly seem that way.

An alternation between somatic disease and severe emotional illness (even psychosis) is too frequent to be merely coincidental. It is seen in obesity, asthma, ulcerative colitis, peptic ulcer and other psychosomatic states. The physician must learn that some of his patients need more "caring" than "curing"; if he can accept this supposedly limited therapeutic goal in some of these sick persons he will avoid the extremes of the Scylla of somatic illness and the Charybdis of complicating emotional sequelae.

Most important in the acceptance of these goals is the need in the physician for increasing awareness of his own feelings when exposed to what seems to be imminent therapeutic failure. When patients fail to comply with

our orders, when they prefer home remedies to AMA accepted pharmaceuticals, when their symptoms persist despite the lack of objective evidence of organic illness, and when they take a reasonable dose of the very newest of the wonder drugs and still fail to improve—no wonder it is difficult for many of us to remain tranquil. Years of experience and clinical exposure to the whims and follies of patients frequently permit the acquisition of some of the equanimity so fervently encouraged by Osler. Some of us eventually reach this Nirvana-like state; many more at least show some outward appearance of having reached it. But very few of us are capable of freedom from the effects of the damage to our egos and the resultant anger and hostility when we are faced with impending therapeutic failure. Despite a calm, unruffled exterior, and even though we learn to grunt at the appropriate times, these supposedly hidden feelings have a way of percolating through so that everyone notices them quite readily except the doctor. What better excuse can the patient then have to quit an obnoxious medical regimen, where either the solace of food, whiskey, tobacco or sex or all of them in one full sweep are so frequently interdicted? At times, the doctor's careful scrutiny of his own feelings is all that is necessary in helping to remove a severe block to the patient's progress. A refractory state may once again respond to standard therapeutic remedies when the doctor again feels hopeful, optimistic, secure and adequate, and is capable of communicating this feeling to his patient. This is especially true in functional illness where no organic disease is manifested. It also applies to patients with intractable peptic ulcers, severe coronary insufficiency, cardiac decompensation, fluctuating even malignant hypertension, rheumatoid arthritis, hyperglycemia, recurrent diabetic ketosis, etc., where psychological influences seek somatic expression and have definitive somatic effects; where the course of illness is influenced by the patient-doctor and doctor-patient relationship. Here again, the psychiatrist is not immune. When his patient fails to react to his psychotherapeutic endeavors, it is often simple enough to rationalize that this patient "cannot be

reached" and therefore requires a course of electroshock therapy or hospitalization in a mental hospital. It would be wise for the doctor to carefully scrutinize and examine his own feelings about this particular patient at this particular time. This supposedly simple, yet most difficult manoeuvre, may then permit an additional opportunity to evaluate the facts more objectively or to seek more facts.

CONCLUSIONS

1. The enigma of functional illness requires an ever increasing integration between medicine and psychiatry.

2. The increasing tendency to medical specialization has concentrated the doctor's focus more and more on the ailing part rather than the total person. A total comprehensive approach requires that the doctor remain alert to both body and mind; that he consider and evaluate both.

3. In considering the etiology of emotional illness, there is room for psychodynamics as well as for biochemical and other somatic considerations.

4. Short-term psychotherapy may be of value in carefully selected patients, depending upon the goals of both the patient and the physician.

5. Although all physicians must be encouraged to learn to utilize the principles of psychodynamics and become better acquainted with psychiatry, they must also learn their limitations. Psychiatrists similarly have limitations, dictated by their training, orientation and experience.

6. In patients with severe psychosomatic disease the somatic symptom may serve as a protective wall of defense. Rapid penetration in unskilled hands may produce a psychotic break. Simple reparative measures may be indicated rather than radical reconstructive ones.

7. Most important is that the doctor, regardless of his specialty, or type of practice, learn to recognize that his own feelings play a considerable role in the effectiveness of his treatment and his ability to ameliorate human suffering—whether it is psychic, somatic or psychosomatic.

Psychosomatic Considerations in "Surgical" Gastrointestinal Diseases

JOSEPH B. KIRSNER, M.D., PH.D.

Emotional disorders are perhaps the most common causes of gastrointestinal symptoms. The mechanisms include irritability and spasm of smooth muscle, alterations in blood flow, and hypersecretion of various glands. The nerve pathways are the sympathetic and parasympathetic divisions of the autonomic nervous system. The "psychosomatic-neurogenic" axis may operate independently or with other mechanisms, to produce significant disturbances of the digestive system.

Thus, among "susceptible" individuals, serious or sustained emotional difficulties may:

1. Induce organic disease (possibly peptic ulcer).
2. Activate latent organic disease (biliary colic in patients with cholelithiasis; hemorrhage in peptic ulcer; fatal recurrences among individuals with ulcerative colitis).
3. Simulate organic disease (irritable stomach as peptic ulcer; irritable colon as appendicitis; functional spasm of bile ducts as biliary colic).
4. Contribute to the severity of organic illness (regional enteritis, ulcerative colitis).
5. Delay the recognition of gastrointestinal disease by overemphasis of concomitant emotional problems (carcinoma of pancreas, other neoplasms).
6. Negate or reduce the beneficial effects of gastrointestinal surgery (gastric resection, ileostomy, colostomy, removal of cancer, narcotic addition in patients operated for recurrent pancreatitis).

Surgery for organic digestive disease may activate latent psychogenic disorders, precipitating grave psychiatric problems. Failure to recognize the problems of the hysterical patient may lead the unaware surgeon to multiple, unnecessary and psychiatrically-damaging operations, for such vague diagnoses as "intestinal obstruction by adhesions," "incisional neuroma" or the "post-cholecystectomy

syndrome." Unrecognized or untreated emotional disorders may induce or increase digestive complaints following surgery for some organic disease which was incorrectly evaluated as the cause of the functional symptoms. This may occur in the heartburn after correction of an esophageal hiatus hernia; ulcer-like distress after vagotomy and gastroenterostomy for presumed active, but actually inactive duodenal ulcer; right upper quadrant pain from an irritable colon in a patient with symptomatic gallstones; and rectal dyschezia or proctalgia fugax after hemorrhoidectomy for clinically insignificant hemorrhoids. Failure to appreciate the role of emotional factors in gastrointestinal disease may lead to irreversible, surgically-induced problems, including esophagitis after resection of the cardio-esophageal area; post-gastrectomy syndrome for asymptomatic peptic ulcer, ileostomy and colectomy for the inadequately treated patient with ulcerative colitis, "small bowel syndrome" for the individual with regional enteritis subjected to extensive bowel resection; stricture of the common bile duct and biliary cirrhosis for the patient with asymptomatic gallstones; and death, from the problems potentially complicating any abdominal operation. Finally, surgery for clinically unimportant organic gastrointestinal disease in patients with serious emotional disorders may "fix" the hitherto reversible psychogenic difficulty, and decrease the possibility of successful psychotherapy.

These considerations emphasize the importance of complete study of all patients with digestive symptoms; those with organic disease, functional disorders, or both. The careful taking of personal life-history will decrease the number of diagnostic errors; reduce the incidence of unnecessary, hazardous operations; provide reassurance to patients needlessly disturbed with the fear of cancer; facilitate proper "timing" of surgery in patients with organic diseases treatable by elective surgery, but with psychogenic disorders requiring prompt attention; permit satisfac-

From Department of Medicine, University of Chicago, Chicago, Ill.

Presented at the Sixth Annual Meeting of the Academy of Psychosomatic Medicine, Cleveland, Ohio.

tory adjustment of patients to extensive operative procedures or to the limited activity imposed by chronic illness; and the thorough history also will facilitate proper management of the functional gastrointestinal disorder after operation for an organic lesion. The "psychosomatic evaluation" should be undertaken before surgery, not after. It should be made

by informed, capable internists with interest and experience in this approach, and, in the more seriously disturbed patients, in cooperation with intelligent psychiatrists. The "psychosomatic evaluation" should then be followed by appropriate therapy. The results are very successful and the approach, therefore, should be positive and encouraging.

A Note on the Japanese Psychosomatic Society

The Japanese Psychosomatic Society was organized at the end of November, 1959. The members of this new society include psychiatrists, psychoanalysts, clinicians of all specialties of medicine, research workers of basic medical science and psychologists (possibly members of education and sociology). The number of the members is about one thousand. The first annual meeting of the society is to be held in Tokyo in May, 1960.

The officers of the society are as follows:
President of the first annual meeting:

Taiei Miura, M.D., psychiatrist, Tokyo
Secretary:

Yujiro Ikemi, M.D., internist, Fukuoka
Treasurer:

Tadashi Abe, M.D., psychiatrist, Tokyo

The society has been so organized as to meet the needs of both the research group and physicians. Two principal goals of the society are to give more experimental and objective evidences to psychosomatic concepts, and to integrate medicine and psychiatry or psychology (including social and environmental aspects of human illnesses), so that we

can approach the "total" concept of medicine from more scientific standpoints and educate the general physicians in the psychosomatic approach.

The organization is trying to combine the features of both The American Psychosomatic Society—more of a research group and predominantly analytically oriented—and the Academy of Psychosomatic Medicine—more meaningful at the level of the general physician. Thus theories on psychotherapy other than psychoanalysis, are to be studied in the society. Above all, Morita therapy is an indigenous and unique therapy for neurosis originated by the late Dr. Morita in Japan. Some authorities in psychotherapy in Japan suggest that psychotherapy in Japan will go in the direction of the integration of psychoanalysis and Morita therapy.

Another project of the society is to apply psychosomatic concepts to public health and factory sanitation.

Yujiro Ikemi, M.D.

Fukuoka City, Japan.

Some Newer Drugs in the Treatment of Depression and Their Relation to Other Somatic Treatments

WILLIAM SARGANT, M.D.

Very considerable advances have recently occurred with use of drugs in the treatment of mental illness. I was working at the Maudsley Hospital in 1936 when Guttman and Peoples first observed and reported on the euphorizing effect of benzedrine. And I was later able to publish with Guttman the first large series of psychiatric patients treated with this drug.¹ Benzedrine, just as we then predicted, has proved to be of very limited value in the treatment of severe depressive illnesses, only generally relieving symptoms for a day or two before relapse again sets in. But it gave us then a first exciting glimpse of the chemical advances in the treatment of depressions, which I personally have always believed were bound to come, but for which we have since had to wait so long. While awaiting these, however, we have seen the development of both metrazol therapy and electroshock as effective treatments of many depressive states. And we have also seen modified insulin and modified leucotomy introduced, both of which have played such important parts in helping to remedy some of the intolerable suffering of depressed patients. Now it seems that a major chemical break-through in the treatment of depressive illnesses is just around the corner. With the increasing number and variety of antidepressant drugs now being developed, it is likely that the treatment of many depressed patients will shortly pass back again from the hands of the psychiatrist into those of the internist and the general practitioner. The ease and simplicity of use of these drugs will make this possible in many depressed patients, some of whom have hitherto been difficult to treat by any of the other methods already available to us.

Today I want to talk about our experiences over the past two and a half years with some of these new antidepressant drugs at St.

Thomas's Hospital, London, to discuss our findings in relation to all the other physical treatments of depressive illnesses already available to us. I believe that if all the methods of treatment, both physical and psychological, are used, and combined when necessary, we will be able to cope in a much more practical manner with the vast numbers and varieties of depressions that come each day to seek the help of psychiatrists and general physicians alike. We shall do no good in trying to pretend that any one form of physical treatment, such as the new drugs, has as yet ousted others, such as electroshock, modified insulin, or even occasionally the use of modified leucotomy. We have already heard the claims made on both sides of the Atlantic that these newer drugs are as good as electroshock. If heeded, this is very dangerous talk indeed at the present time. It will inevitably mean that quite unsuitable patients will be put on drugs and left on them for far too long, only to worsen and to end in suicide. Such deaths can so easily be avoided if only we continue to consider all the many other methods of treatment of depression now available instead of restricting ourselves to only one. What I think we can say about these drugs is that they may help to avoid electroshock in some patients, and can be invaluable in others where electroshock is doomed to failure. And though electroshock does still have to be used in many severely depressed patients, evidence is increasing that these drugs may diminish the number of electroshocks needed in any particular course of treatment.

There is another point I want to make before going on to a more detailed report on the use of such drugs. I believe that we often make mistakes in reporting and thinking about our treatment results because we tend to do so too much in terms of crude statistics. These often bypass and ignore all the important, and quite different, treatment subgroups seen in depressive illnesses. What really concerns us as clinicians much more than crude treatment percentages, and what we have been trying to

From St. Thomas's Hospital, London, England.

Presented at the Sixth Annual Meeting of the Academy of Psychosomatic Medicine at Cleveland, Ohio.

work out in the past two years at St. Thomas's, is consideration of the differing clinical types of depression responding to the varying types of new antidepressant drugs, and just where other and more established methods are better used as alternative or additional treatments. Only when we have differentiated the important clinical subgroups can statistics help to give us the clinical information we wish.

Marsilid, Nardil and Marplan

The first group of antidepressant drugs that I want to talk about is Marsilid (iproniazid) and what are claimed to be its less hepatotoxic substitutes: Nardil (Warner-Chilcott), Marplan (Hoffmann-La Roche), and Niamid (Pfizer). And there are several more of these also being developed and brought into use at the present time. The worry about Marsilid, as we have been told repeatedly, is that about one or more in every five hundred patients develops a severe acute hepatitis from its use, that one in five of these jaundiced patients subsequently dies from liver necrosis. Now, at St. Thomas's and at Belmont Hospital, where we have also been using Marsilid intensively, we must have given this drug to over a thousand patients by now. We have had four cases of jaundice at St. Thomas's, but as yet none at Belmont. Fortunately, so far, none of our cases has been fatal. I do think that perhaps the overall risks have been exaggerated by some hospital workers in my country and in yours, especially in light of the great amount of good that this drug can do in suitable patients. This toxicity has naturally been a constant anxiety to us, and I am glad to say that we now seem to be getting substitutes from the drug manufacturers which have much the same effects as Marsilid, but so far do not appear to carry the same risks of liver damage. Long periods of testing, however, will still be necessary before we can be quite certain about this. It was nearly eighteen months before we had our first case of Marsilid jaundice at St. Thomas's Hospital.

I personally have been using Nardil (Warner-Chilcott) a lot in the last few months, and it seems to me to be almost as good as Marsilid in its effects. I have not had quite the same amount of personal experience with Hoffmann-La Roche's Marplan, but Dr. Peter Dally who is doing research work on these drugs in my department, tells me that he finds

that it too can be used as a satisfactory substitute for Marsilid. The other drug, Niamid, so far has not come up to expectations as a Marsilid substitute, though it has been found to have other uses in some types of depression. So what I have to say about Marsilid may in general apply to both Nardil and Marplan, though not to Niamid.

Use in Atypical Depressions

One of the most important points about Marsilid and its analogues is that it appears to help a whole group of "atypical" depressed patients who are often not helped at all, or only very slightly, by electroshock and other treatment methods; and this is an important observation which I do not think has gained proper recognition as yet in the literature on this subject. An exception is a paper that has been published by Dr. Peter Dally and Dr. Eric West from St. Thomas's Hospital,² drawing attention to and emphasizing this important finding. Such "atypical depressions" are ordinarily the despair of the general physician and the psychiatrist alike. They may show "hysterical" types of depressive reaction, and some of them could just as well be diagnosed as anxiety states with depressive and hysterical features. A few patients in this group of "Marsilid responders," as we have started to call them, also superficially resemble cases of gross hysteria, except that they nearly always have a history of having had good or even excellent previous personalities prior to the onset of their illness, and they generally appear to have carried on quite well in ordinary life, and only to have broken down as a result of some special or prolonged stress. For two years or more, they may have been complaining of vague depression, increased emotionality, diffuse anxiety, and sometimes of phobic fears of going out in the street, of traveling alone, etc. They may also have become bad tempered, irritable, hyper-reactive and aggressive; quite unlike so many of the more endogenously depressed patients. They often retain good insight into the abnormality of their behavior, but they do not seem able to control or improve it.

One of the ways in which they can be distinguished from ordinary depressed patients more suitable for electroshock, is that their sleep rhythm and diurnal mood patterns are not typical of endogenous depressions in gen-

eral. For instance, they often feel worse as the day goes on, rather than being noticeably worse in the morning, as are most endogenous depressions. Furthermore, they may either sleep well all through the night or have difficulty in getting to sleep, rather than showing the typical early morning waking of most true depressives. They are also less inclined to blame themselves, and they may not show the same retardation and agitated indecision.

Many doctors listening to me will recognize and remember many such patients in their psychiatric and general practices; they are often the bane of one's psychiatric life. This is because they are people who also get so upset by most other treatments that are suggested for them. If they have electroshock, for instance, they often become very much worse and develop distressing temporary unreality feelings. When, alternatively, you give them drugs such as chlorpromazine or phenobarbitone, they often say that these make them feel very giddy, even with small doses. But they are generally helped by Sodium Amytal, because this relieves some of their tension and the more reactive aspects of their depression, and creates a pleasant euphoria.

Now, we have found at St. Thomas's that many such "atypical" depressions, in patients with good previous personalities, respond in quite a dramatic manner to small doses of Marsilid, and we have found that they also do so with its less toxic analogues Nardil and Marplan. One has only to put them on two or three tablets a day of Marsilid 50 mg., or up to four tablets a day of Nardil 15 mg., or Marplan 10 mg., and they can start to feel better in sometimes less than a week. The improvement becomes obvious both in their mental state and in their physical well-being; and they may also start rapidly to regain lost weight. Some of them then have to be kept on small doses of these drugs for quite a long time. Their almost specific effect in such patients is often shown by the fact that within a few days of leaving off the drug there is a quick relapse and a return of symptoms. We have been able to use many such patients in our department to test out the supposedly new Marsilid substitutes. Their response to Marsilid is so specific that they can tell you almost straight away whether the new drug you are giving them is a substitute for Marsilid or not. Some tend to complain very bitterly when

given inert pills during more detailed statistical trials. Why I have taken so much trouble to delineate this special group is because, in my twenty years' experience, this sort of neurotic patient has been one of the most impossible and difficult to treat by any method until the advent of this new group of drugs.

Relation to Electroshock

We have also been told by the drug manufacturers that some of the new antidepressant drugs are as good as, or better than, electroshock. Well, I can only say that although at St. Thomas's we are using these antidepressant drugs very intensively, we still have to use a lot of electroshock. If one gives such drugs combined with electroshock for the more typical and severely depressed patient one does, however, find that the number of electroshocks needed in a course sometimes seems to be diminished. In cases of depression suitable for electroshock, the alternative use of some of these drugs, especially Tofranil, for a month or more, results in about 50 per cent of such patients getting better without electroshock. But people should not generally be left in states of agitated depression and misery for so long, and with so many of them still needing electroshock treatment at the end of it all. The risk of suicide becomes so very much greater. We find that by far the best thing to do is to give the severely depressed patient a few out-patient electroshock treatments together with one of the new drugs; later the improvement can often be maintained without much further electroshock by continuing the use of chemotherapy.

Prevention of Recurrent Depression

Another point about the group of drugs under discussion is that they do appear to have prevented recurrent attacks of depression in at least some patients, when everything else had previously failed to do so. You may start to give them Marsilid, for instance, at the beginning or in the middle of a recurrent attack of depression, and they quickly emerge from it. You may subsequently have to keep them on small maintenance doses of the drug throughout the normal phase, and as soon as another attack starts, increase it again for the time being. In other severer cases, the drug has not been able to stop the attacks, but only

to diminish their intensity and make them more tolerable to the patient.

A further important use of such drugs is shown in the case of a doctor who was sent to me recently for a second opinion on the treatment of his three years' long attack of depression. He had generally made some sort of temporary improvement with electroshock, and had in fact had around fifty of these; but he relapsed again as soon as they were stopped. He was referred for an opinion on the desirability of a modified leucotomy, or for a definite statement that he was unfit for further work in the National Health Service. This patient was given Marsilid and subsequently Nardil, and a few more electroshocks. He made a good recovery and is now back at work. But he has found that he needs to stay on Marsilid 50 mg. t.i.d., or its equivalent in Nardil, or he quickly starts to relapse again. In other patients, too, Marsilid and its analogues have seemed able to maintain recovery when only temporary improvement is obtained with the use of electroshock alone. Undoubtedly, this is going to mean that some depressed patients will be saved from having modified leucotomies because of their resistance to electroshock when used alone over long periods of time. I have also got the impression that in those recurrent depressions which do not normally respond to electroshock when given too early in an attack, a combination of electroshock with one of these new antidepressant drugs is also going to prove much more effective in the early stages of the illness than the use of electroshock alone. This is especially true if the drugs are continued for some time after stopping the shock treatment. However, we have not found in Great Britain that we can as yet always dispense with the use of modified forms of leucotomy confined to the lower medial quadrants of the frontal lobes, if we are really going to try to help all the chronically depressed patients coming to us for relief.

Tofranil

Now the other drug in general use which I would like to discuss is Tofranil. I still find it difficult to sort out just where Tofranil is helpful and the other, much cheaper drugs, already discussed, are not. I personally have not been half so impressed with Tofranil as I have been with Marsilid and Nardil. In the anxiety hysterias and in the hysterical de-

pressive states that I have been talking to you about, Marsilid and its analogues seem to me to work better than Tofranil. There are a few neurotic patients, however, who seem to do better with Tofranil when the other drugs have failed to help them. Some patients with neurotic pains and exhibiting states of great depressive tension and anxiety fall into this category. One also sees psychopathic patients with tension and depression who are also greatly helped by Tofranil when other drugs have been without effect. It may well turn out that Tofranil is more useful in the severely retarded and agitated patient, especially when combined with electroshock. These, however, are by no means constant findings, and we must still work out just where these groups of drugs overlap clinically, and where they are sometimes different in their action.

CONCLUSION

In conclusion I would like to remind you that if we had been asked to discuss the physical treatments of depression, and especially the drug treatments, twenty-five years ago when I first entered psychiatry, there would have been very little hopeful to say about them. The lot of the depressed patient was generally a terrible one both in mental hospitals and outside of them. But we have gone far since then, and we still seem to be advancing very quickly indeed. Now that we are starting to have such a large range of physical treatments at our disposal in depressive illnesses, let us try to use them like proper physicians and surgeons, and not think that any one physical treatment method is going to help too large a range and type of depressed patient. Through the advent of these new drugs, and the skillful and selective use of all the other physical and psychological methods now at our disposal, there are going to be many fewer depressed patients who cannot be helped than there were in the past. I look forward confidently to the day when the treatment of very many depressions will return again into the hands of the general practitioner to be handled as ordinary illnesses by quite simple chemical methods.

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Emotional Stress and Coronary Heart Disease

BURTON L. ZOHMAN, M.D.

Medical authors of antiquity, the Middle Ages and the Renaissance, ascribed cardiac diseases almost exclusively to emotional disorders. Post-mortem studies, notably by Zimmerman,¹ seemed to confirm this general idea. Concepts such as "dying of a broken heart" were often reinforced by finding cardiac rupture at autopsy in the grief stricken. Most of the learned ancients believed that different emotions had specific effects on the circulation, a belief which is still held in some quarters today. In the early 19th century Corvisart² and his followers believed emotion to be the most important cause of heart disease. They thought, for example, that the cause of cardiac and aortic dilatation was the driving inward of the bodily humors during psychic stress. Sudden development of dropsy, cardiac hypertrophy and aortic aneurysm immediately following a single, severe emotional upset, was often described. As late as 1870, Tuke,³ a leading psychosomaticist, stated, "It is not surprising that in the present day when the worry of life and strain on the feelings in all ways are so vastly intensified, there should be strong evidence to show the increase of cardiac affections." The cardiologist, Balfour,⁴ expressed similar ideas twenty-five years later. This controversy of over a century ago sounds familiar today when cardiologists speak of coronary artery disease.

Although the etiology of coronary atherosclerosis remains unknown, there can be no doubt that deranged lipid metabolism may be one of a number of predisposing causes of the condition. On the other hand, there is increasing evidence, in recent years, to indicate that other factors contributing to the development of coronary disease include heredity, physical exercise, hormonal dysfunction, accelerated blood clotting and emotional stress.

The factor of stress is surrounded by semantic and measurement difficulties. Definitions of emotional, occupational and life stresses are legion. They are almost as fre-

quent as are investigations of the problem. They are based on qualitative impressions and as yet no satisfactory method has been devised for its measurement. Some observers, therefore, find it unsatisfactory to accept quantitation in terms of stressful situations, personal, social, economic or other, inasmuch as what really is of concern is the effect of any particular stressful situation upon a particular individual. Stress and strain are likely to be highly individualized. A set of circumstances mildly stressful to one person, can readily be conceived to be either mildly, moderately or overwhelmingly stressful to another. What is needed is some method of quantitating the nature of the interaction of the situation with the individual.

In recent years, there has been strong denial of any scientific basis for the clinician's impression that mental stress or emotional upset predispose one to coronary artery disease.⁵⁻⁷ Dunbar⁸ described a "coronary personality" characterized by "compulsive striving, hard work, self-discipline and great need to get to the top." Arlow⁹ also found a distinct set of personality traits in patients with coronary artery disease very similar to those of Dunbar. Both researchers emphasized the psychodynamic importance of the patient's childhood conflict with authority. Arlow stated further that the patient continued to re-experience his old conflict with authority over and over again as he unconsciously re-created in new forms the original situation of competition. He drove himself compulsively through hard work and self discipline, but success brought no sense of gratification or relief from tension.

Recently Wolf¹⁰ described the coronary prone person as "a man who is highly competitive in his attitudes, if not in his behavior, concerned with self-sufficiency and with doing things on his own and usually the hard way." Miles and associates¹¹ in a complete and careful psychosocial survey of 46 patients with 49 healthy controls, were unable to confirm the "coronary personality" described by Dunbar and Arlow as a significant factor in the etiology of coronary artery atherosclerosis. On the other

From Maimonides Hospital and State University College of Medicine, Brooklyn, N. Y.

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hand, Kemple" characterized the coronary patient as an aggressive, ambitious individual with an intense physical and emotional drive, unable to delegate authority or responsibility with ease, possessing no hobbies and concentrating all his thoughts and energy in the narrow groove of his career.

In order to gain insight into the possible etiologic and predisposing influences concerned with the development of clinical coronary disease, Dr. Russek and I,¹² like others, have searched for clues among patients afflicted at a relatively early age in life. During a ten year period, we have had the opportunity to study the heredity background, health habits and mode of life in 100 young adults with manifest coronary disease and compared the data obtained in a control group of 100 persons with the same age distribution without coronary disease. Our findings have convinced us that certain personality traits and behavior patterns are fairly characteristic of the young candidate for coronary disease. Almost invariably, he was found to be a hard driving, goal directed individual who lived beyond his normal capacity and tempo, minimized his symptoms, and neglected prudent rules of health.

More recently, Friedman and Rosenman¹³ compared three groups of men selected on the basis of the behavior pattern which they manifested in their work. One group, judged by their co-workers and a series of personality tests and observations, consisted of hard driving, heavily stressed individuals, plagued by "deadlines." A second group of the same ages and physical type consisted of ambitionless, non-competitive and "easy going" types, and a third group whose personalities closely resembled those of the second group were blind and unemployed and therefore had the complicating factor of continual anxiety. The researchers found that the groups ate, drank, smoked and exercised about the same. The driving men had significantly higher levels of cholesterol circulating in their systems. Their blood had a shorter clotting time and they had about seven times as much coronary disease. It is noteworthy that 84% of the subjects in this group exhibited a behavior pattern characterized by "excessively rapid body movements, tense facial and bodily musculature, explosive conversational intonations, hand and teeth clenching, excessive unconscious gestur-

ing and a general air of impatience." Similarly, Bogdonoff and his associates¹⁴ have shown that acute stress may double or even quadruple serum non-esterified fatty acids, as does the administration of epinephrine and norepinephrine. From these observations, they are of the opinion that "some neuro-humoral mechanism plays a part in the non-esterified fatty acid response to stress."

The careful studies of Gertler and White¹⁵ on the one hand, and Yater and his associates¹⁶ on the other, have demonstrated a considerable difference in the kind of positions held by young coronary patients as compared to controls. Although no difference was noted in the dietary habits of younger patients with coronary artery disease from those of the controls, the young coronary patient almost always had a position demanding responsibility and frequently associated with occupational stress. Brock¹⁷ and Bronte-Stewart¹⁸ have likewise pointed out that if job responsibility were used as an index, as good a correlation could be found between it and a higher incidence of myocardial infarction as was found with the dietary fat intake.

Last year, at the Annual Meeting of the American Heart Association in San Francisco, there was an interesting report on the relative importance of stress and diet in the etiology of atherosclerosis. Two teams of observers, one from the Medical College of South Carolina and headed by Dr. Groom; the other from the University of Haiti and headed by Dr. Pean, studied the post-mortem hearts and aortas of 139 South Carolinian negroes and 128 Haitians, ethnically indistinguishable, of equivalent ages and the same sex distribution. In the Carolinian group, the hearts showed twice as much coronary atherosclerosis as did the hearts in the Haitian group. Those in the Haitian group got far less to eat and as many as 42% in the poorer classes were underweight while 30% of better fixed Charleston negroes were overweight. In addition, the Haitians had practically no cholesterol in their diet while the South Carolinians had six to twenty times as much. When the aortas were studied in both groups, it was found that just as many Haitians as South Carolinian aortas were diseased. To Dr. Groom, the findings indicated that stress was a more important factor in the etiology of

coronary atherosclerosis than diet. It was further pointed out that unlike the Haitians who slept more, worried less, lived at a slower, less stressful pace, the life of the American negro was inherently more competitive and compulsive.

Weiss and associates¹⁹ have reported that gradually mounting tension prior to onset of coronary occlusion occurred in 49% of their cases under investigation. Our own observations¹² are in accord with these findings. In a group of 100 young coronary patients, prolonged emotional strain associated with job responsibility preceded the attack in 91% of the cases as compared with 20% of the controls. Twenty-five percent of the patients not only worked at full time jobs during the day but also engaged in similar or different occupations during evening hours. Another 46% of the coronary group had worked 60 hours or more per week for long periods immediately preceding clinical manifestations. In another 20% of the group there was unusual fear, insecurity, discontent, frustration, restlessness or inadequacy in relation to employment. We observed as did others²⁰ that occupational stress may be assessed differently by the community at large and by the individual job holder himself. It is only by a careful evaluation of the individual reaction to the stressful situation that some index for quantitating stress can be provided.

At present, there is no clear understanding of the manner in which emotional stress may lead to clinical coronary artery disease, but numerous investigations are pointing the way. Recent studies disclose that emotional stress liberates a substance into the circulating plasma which mobilizes lipids in some unknown manner and may be part of the natural alarm system. In the presence of slight or mild liver damage, the serum is loaded with lipid material including cholesterol. It would seem that the lining of the artery must be primed in some way to allow the deposition of such atheromatous material. Friedman and his group,²¹ Hammersten and his group,²² Groover,²³ Wertlake and his co-workers²⁴ as well as our own group, have observed striking elevations of the serum cholesterol during transient stressful life situations. Dock²⁵ has pointed out "that intense frustration, disappointment, anger or hostility as well as guilty anticipation or attainment of forbidden pleas-

ure are the stresses which most often precipitate heart attacks, either coronary or congestive and that other moods such as depression and sorrow seem to spare rather than damage the circulation. Victims of Nazi concentration camps were notably free of coronary disease." By augmentation of adrenocortical function, emotional stress can raise blood cholesterol, decrease clotting time^{21,26} and further, through a decrease in blood eosinophiles,²⁷ set the stage for the development of coronary occlusion.

It is interesting to note that Selye and Fortier²⁸ have described increasing capillary permeability and hemorrhage, hemoconcentration and hypertension or hypotension (depending upon the intensity of the stress) during the alarm reaction "of the general adaptation syndrome." Emotional and physical stress have been shown to produce an increase in blood viscosity, an increased hematocrit, a decrease in sedimentation rate and decreased coagulation and prothrombin times as well as a change in blood pressure. There is, therefore, objective evidence that the vascular tone and the clotting mechanism of the blood are influenced by physical and emotional factors involving also the central nervous and endocrine systems. Occlusive coronary artery disease is not due simply to increased atheromata in the coronary vessels. Other conditions are necessary and the capacity of the heart to deal with these in relation to the demands made upon it, is an important consideration.²⁹ More recently, Selye³⁰ has been able to produce massive infarct-like necroses in the myocardium of various experimental animals by sensitization with certain corticoids and exposure to a variety of stressors. Whether a relationship exists between these lesions and the cardiac infarcts of man, is not presently known.

From all the evidence, it would appear that there are three major factors in the initiation and progression of coronary atheromatosis in young adults; namely, heredity, a high fat diet and emotional strain. Without exception, one or more of these factors was present in every patient in our coronary group whereas none of these influences were observed in 24% of the control subjects. At least two of the major factors were evident in 95% of the coronary patients as compared with only 12% of the control subjects. Emotional stress, usually associated with job responsibility,

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however, appeared far more significant in the etiologic picture of coronary disease in young adults than heredity, the quantity of fat ingested, tobacco, obesity or exercise.

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Defective "Psychological Weaning" in Psychosomatic Pathology

VICTOR SZYRYSKI, M.D., PH.D.

That there is a relationship between psychosomatic symptoms, current stress and past emotional experiences of an individual is a generally accepted concept in psychosomatic medicine. Further research is directed towards discovering more specific relations between certain clinical conditions and some definite types of stress or past experiences. In this way it is hoped to establish a greater degree of predictability in this field in order to provide a solid, scientific foundation for psychosomatic hypotheses.

This paper is concerned with a definite life situation which appears to be closely related to some patterns of symptoms.

It is common knowledge, that successful "weaning away from home" during adolescence or early adulthood is necessary for healthy emotional adjustment.¹ On the other hand, stimulating research of Bowlby, Albino and others²⁻⁴ provided ample and convincing evidence concerning the effects of psychological weaning in early childhood on psychological reactions and personality disturbances of children or adolescents.⁵

Defective psychological weaning in adults leaves either severe guilt feelings, often followed by anticipation of "magic punishment" for rejecting the parents or, in the other cases, there remains strong fear of separation with constant longing to be reunited with the parents. In the weaning process hostility may develop toward the family, especially the wife, and result in psychosomatic symptoms.

Obviously these attitudes may exist in mixed form, with marked emotional ambivalence to the psychological weaning. Often the reactions may be repressed from the conscious mind or temporarily overcompensated, revealing their presence only through psychosomatic symptoms and in psychoanalytic therapy.

For the purpose of this study 23 cases were selected from our consulting and psychotherapeutic practice in local hospitals and office

practice. In all instances symptoms could be easily related to defective psychological weaning. Two clinical groups emerged from this observation:

1. Acute anxiety reaction, occasionally mixed with manifestation of cardiac neurosis (nine cases).
2. Other psychosomatic disturbances, such as diarrhea (four cases), morning vomiting (two cases), neurodermatitis (three cases), stubborn colds (one case), asthma (two cases), and paroxysmal tachycardia (one case).

(In many other of our patients with psychoneurotic or psychosomatic disorders defective psychological weaning seemed to be responsible for these symptoms. They, however, are not included as only cases with dramatically apparent relationships were selected.)

In the first group the symptoms of anxiety appeared when patients were faced with the necessity of leaving home or their locality for a length of time. Characteristically, all were already physically separated from their parental homes for some time.

Case 1. A young soldier of 19, single, in otherwise good health, had frequent attacks of acute fear ("something is going to happen, I feel so scared, it makes me shake all over. I can't stand it any more").

He enlisted in service at the age of 18. His mother was against it; father signed the application form. Family life was extremely poor; father an alcoholic, mother a martyr, over-concerned about children, sacrificing for them. The boy has been longing for a happy home—"Sometimes I would walk in winter under the people's windows and see them happily playing around the table or watching TV. I would like my home to be similar." When he enlisted he was hoping to be sent far away. However, because of his youth he was stationed near his home town and permitted to live at home. After a year he applied for overseas duty. Two weeks later his symptoms suddenly appeared.

Case 2. A 26 year old mechanic in an elevator company, married, with two children. In the past five or six weeks "he had become a different man." He was irritable at work and short-tem-

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pered with his children. Always a good sleeper, he now wakes up at 4 or 5 A.M. and cannot sleep further. He suffers spells of shortness of breath with palpitation. At such moments he is overcome with fear that "something will happen." His family life is happy and contented with no need for worry. He can find no explanation for his condition.

He told us that his company had offered to transfer him to another state on a new job with substantial increase in pay. His family was happy about it and the patient gladly accepted the offer. A week or so later he started noticing his present symptoms.

His parents live about 120 miles from his present home. "Do you write often to them?" "Frankly speaking, I force myself." His father was a mild, honest man, now suffering from a heart ailment. The mother was an anxious, oversolicitous, hard-working woman. "She always worried about the kids. After my marriage she wanted us to stay with them." The patient has been married for six years. He visits his parents on holidays, or they come to spend a couple of days with the patient and his family. "They are not rich, but they bring a lot of presents, and they take the kids downtown and buy them lots of rubbish. It makes me so mad that I hate their visits."

At first the patient could see no relationship between his symptoms and his attitude towards his parents. An intelligent man, he quickly responded to psychotherapy, ventilating his resentments and guilt feelings freely. His symptoms subsided noticeably in a few weeks and his mood changed to his previous cheerful and self-confident attitude.

Case 3. A 40 year old accountant, shy and reticent, but apparently very efficient. From time to time he had to visit branch offices of the firm. Ordinarily a temperate man, he has to drink on the train to subdue his acute anxiety. He was an only child, and his father died when the patient was 11. His mother, a very domineering woman, tried hard to make a "man" out of him. She now lives in the neighborhood and often visits the patient's home, although his wife resents the mother's interference.

In the next group of our series there are two rather similar cases of recurrent colitis in middle-aged, ambitious executives, who planned to take post-graduate university courses to improve themselves. One, during each of four attempts to go to the university center for a few weeks, suffered severe diarrhea either before leaving or during the first few days away from home. The second, who has had some psychotherapy for mild anxiety

neurosis, had less severe diarrhea which kept recurring during each summer course for three years. In spite of that, he successfully accomplished his plan. In both cases there was a characteristic history of mild, submissive, kind fathers—dominated by exuberant, domineering, highly neurotic wives "sacrificing" for their offsprings. In spite of subsequent satisfactory marital adjustment, these patients never lost their oversensitivity to separation from home.

The following case offers a good example of displacement of the defective weaning situation to the current family life, requiring more meticulous and analytical search in order to elicit the origin of symptoms.

Case 4. A 38 year old government official complained of repeated bouts of morning vomiting, which also occurred during receptions, etc. He had already undergone some analytically oriented therapy in another city where he has discussed his early family history, describing his mother as a very efficient, demanding, domineering and successful business woman. She openly interfered in his life. She had instructed teachers at school how he should be handled, reprimanded his scoutmasters and practically chose his courses at the university, until he made a firm step to gain more independence. He married against his mother's wishes and she did not get along with her daughter-in-law. On a few occasions, much to the patient's distress, she also interfered with his present work, offering "guidance" to his superiors—how to make better use of her son's abilities. The patient still feared his mother but was far enough away to feel relatively "safe." He described his present family life as perfect. His wife had given up a business career to marry him. There were three happy children, a boy and two girls. Sometimes he became annoyed and resentful at the therapist's inquiries suggesting a more immediate cause at home for his persistent symptoms. He reassured the therapist every time as to the excellent and cordial atmosphere at home.

Once he reported a dream in which he saw his boy vomiting some sandwiches which he got from his mother. In the dream the patient had a violent quarrel with his wife. During analysis he promptly picked-up his boy as representing himself but also insisted that his wife in that dream represented his mother!

An acute attack of anxiety which appeared a few months later, clinched the dynamic diagnosis and became a turning point in the patient's recovery. While the family was preparing for their summer holidays he was suddenly requested

to fly to a conference abroad. Always at ease about flying, this time he developed an acute panic with fear of being killed in a plane crash. This reaction was precipitated by his wife's casual remark expressing disappointment that she would have to prepare for their vacation without his help. This remark unexpectedly infuriated the patient, who suddenly felt that his wife should leave him alone to attend to his work and look after her own part in family life, without making him guilty for refusing his assistance. He could not shake off this feeling which resulted in an acute attack of anxiety. In spite of his previous denial, his true ambivalent feelings towards his wife became apparent, so that the following periods of psychotherapy were focused on this topic with rapid alleviation of the patient's vomiting.

Aggressive feelings towards parents giving rise to severe guilt with fear of "magic punishment" were dramatically illustrated in a case of a girl of 18, who, although attached to her father, resented his excessive control over her. She had run away with her boy-friend and married secretly. However, when her father was killed in a mining accident a few weeks later, she developed acute anxiety with a severe cardiac neurosis.

The far reaching, "secondary" effect of faulty psychological weaning was illustrated in our group of patients by a bank official an intelligent man, who idolized his mother and kept using her as an example for his wife. This often resulted in serious marital troubles, and after about 10 years the wife developed progressive rheumatoid arthritis. She persistently kept accusing her husband of depriving her of his affection and acceptance which remained focused on his mother.

DISCUSSION

We have presented a few characteristic cases illustrating the influence of defective psychological weaning on the appearance of neurotic and psychosomatic conditions. In all of the cases when acute symptoms appear during absence of the patient from his home, the following sequence of events seems characteristic:

- history of poor adjustment in the parental home, with possessive, over-protective or "sacrificing" parents,
- poor psychological weaning, with much hostility for parental emotional domination and considerable guilt feeling,

- threat of separation or physical separation, whether from the parental home, or—even more frequently—from the patient's own wife and children,
- possible additional stress of being in new surroundings,
- appearance of acute anxiety or psychosomatic symptoms.

Often the real source of psychosomatic symptoms cannot be found on reviewing the current life adjustment of the patient. Only inquiry into his weaning process, prompted by the characteristic symptom-complex, related to the threat of moving away, may reveal the basic cause of the neurosis.

Some patients find it difficult to reveal their true relationship with the parents. Already ridden with "weaning guilt" they would try to minimize or to cover up unhappiness of their childhood. When asked, "Tell me now something about your parents"—they would readily answer: "They are O.K." "Oh, they are regular folks," "I am sure they were trying their best," "I liked them, they were good to me." However, if you diminish their direct ego-involvement and ask in the indirect way, surprisingly violent admissions may be revealed:

"Tell me now, you have a little girl of your own, would you like to bring her up the way your parents raised you?"

"Oh, doctor, never!" "What do you want me to do, to make my child unhappy!" "Do you want me to ruin my child?"

Obviously, after applying this key, it is not difficult to reveal true family dynamics. The goal of therapy in these cases appears quite clear: by permissive and reassuring ventilation of feelings towards the parents, by helping the patient to describe in detail many significant experiences of childhood and adolescence, and by proper handling of the transference relationship during therapy, a new pattern of adjustment to the patient's parents, whether near or remote, may be obtained. Considering the importance of ego-involvement with the parental figures, ego-strength should be carefully observed and good support provided during psychotherapy.* Too rapid uncovering, especially concerning the oedipal involvement of parental figures, should be at first avoided.

The effect of this therapy is not only to alleviate the symptoms, but also to promote better relations with the parents. Displacement mechanisms should also be investigated and many current family problems may be eliminated by finding out and helping the patient to understand their remote source in one's own or the mate's childhood. Further research to evaluate the significance of defective weaning in different groups of psychosomatic disorders appears indicated.

SUMMARY

The significance of "defective psychological weaning" in the formation of psychosomatic symptoms has been discussed and illustrated with pertinent case histories. The psycho-

therapeutic approach to cases with defective weaning has been outlined.

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The Birth of Psychosomatics

When the goddess Minerva, in full armor, clove
Her way from the brain thru the cranium of Jove
Thus sparing some great dame a puerperal-bed-ache,
Her advent gave Jupiter some splitting headache.

Thus with *Psychosomatics* there has been no dearth
Of travail, pains and headaches preceding its birth,
For those who conceived it (they don't look so hot to me
After this Jovial type of lobotomy).

Since Jupiter served as the *head* Roman God he
Reserved for Minerva, wisdom of the body.
Such facts Cannon clarified for those who missed 'em
Like (my) body reactions to "Minerva's" system.

And the Greeks made it plain, if you wish to attain
God-like minds, have some-body linked up with your brain.
So in *Psychosomatics* it's not Greek but fact
That the Body and Mind constantly interact.

But no myth is the root of what's Psychosomatic;
It springs from the seeds of all arts Hippocratic.

Sam Süber, M.D.
Brooklyn, N. Y.

Personality Traits in Organic Diseases

GEORGE CRILE, JR., M.D.

I. PANCREATITIS

Two of the most painful chronic diseases encountered in abdominal operations are penetrating marginal ulcers and pancreatitis with calcinosis of the pancreas. The personality traits of the patients with each of these two diseases are apt to be quite different.

Patients with penetrating marginal ulcers may have continuous severe pain, so bizarre in its distribution and so resistant to relief that for long periods the diagnosis may be missed. As a result of continuous unbearable pain these patients behave in such a way that often they are accused of hypochondriasis or hysteria, and they become so dependent on narcotics that they may be taken for addicts. Regardless of how long the pain had persisted and narcotics had been used, from the moment of their recovery from the anesthesia of the corrective operation these patients are relieved of their pain. During convalescence they require no more narcotics than do patients convalescing from other abdominal operations. Their patterns of behavior revert at once to normal. They return promptly to productive work.

In contrast to this happy story, the patient with calcinosis of the pancreas, even after total or subtotal pancreatectomy, is apt to continue to complain. Before the proper diagnosis was established, these patients, like those with marginal ulcer, are apt to be regarded as neurotic or hysterical. Many of the men are chronic alcoholics. Many of the women have the overly fine-plucked eyebrows, and the obsessive habits of patients with neuroses. Many of them take narcotics to relieve their pain. Unlike the patients with marginal ulcer, most of these patients continue after operations to complain of pain, and many continue in their alcoholism or in their addiction to narcotics. Why is there such a difference in the results obtained by operation in the two conditions?

From the Department of General Surgery, The Cleveland Clinic Foundation, and The Frank E. Bunts Educational Institute, Cleveland, Ohio.

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Operations short of total pancreatectomy do not remove all of the diseased pancreas, and it is possible that some of the patients treated by subtotal pancreatectomy with retrograde anastomosis of the pancreatic duct to the jejunum continue to have pain from the residual pancreas, and require narcotics for its control. The pain, however, usually is different from that before the operation, and oftentimes an entirely different series of complaints are given. The men who formerly claimed that they took alcohol to relieve the pain, usually continue to drink excessively even if pain is not present. The question arises whether the personality is the result of the pancreatitis or whether it is chemically or genetically associated with it.

So far as is known there is no direct hormonal relationship between pancreas and parathyroid. Yet, a number of families have been reported in which there was an association between chronic relapsing pancreatitis and adenomas of the parathyroids with hyperparathyroidism. In the Zollinger-Elliston syndrome of gastric hyperacidity and peptic ulcer, adenomas of the islet cells of the pancreas are associated with adenomas of the parathyroid, adrenal cortex, and pituitary. Lesions of the hypothalamus are also increased in patients with peptic ulcer. Patients with carcinomas of the parathyroids and severe hypercalcemia often die of acute pancreatitis.

The familial association of lesions of the parathyroid and the pancreas, and the common association of lesions of these two organs in individual patients, suggest a genetic or chemical background for relapsing pancreatitis. Perhaps the alcoholism and the often unbreakable dependence on narcotics are central nervous system traits associated with or arising from a genetic defect in mind as well as in body.

II. CIRRHOSIS OF THE LIVER

Cirrhosis of the liver in Wilson's disease and perhaps in chronic alcoholism are examples of the linkage of cerebral lesions with pathologic changes of abdominal organs. In Wilson's disease the lenticular nucleus of the brain is damaged and apparently simultane-

ously, cirrhosis of the liver develops. It is perhaps no coincidence that the gait and speech of the patient with Wilson's disease (hepatic lenticular degeneration) resemble those of the chronic alcoholic. This association of cerebral and hepatic changes raises the question of whether the effect of alcohol is primarily on the liver with secondary cerebral changes, or whether the cirrhosis is secondary to the effects of alcohol on the vulnerable brain cells. It is interesting too that most of the amine oxidase inhibitors and other mood-changing drugs (including alcohol) occasionally cause damage to the liver.

When we consider the atrophy or failure of growth of denervated limbs, or the trophic effects of transplanted nerves on the regeneration of limbs or skin of salamanders, it becomes possible that we will have to revise our concept of the wire-like function of nerves. A nerve may be more like a hollow pipe than like a wire. It may be actively engaged in transporting or producing neurohormones that are essential for the well-being of various organs. If diphtheria and tetanus toxins can run up peripheral nerves to damage the central nervous system, there is no reason why trophic neurohormones, or impulses that form them, cannot run down nerves to the organs they innervate. The presence or absence of such neurohormones might be responsible for some types of cirrhosis of the liver. In reverse, there is no reason why nerves from various organs should not transport to the cells of the brain, chemicals that are essential to the function of the brain cells.

III. ULCERATIVE COLITIS

Patients with active ulcerative colitis are apt to be emotional, hypersensitive, and uncooperative. Many of these patients are unreasonable and difficult to treat. Remissions of the disease have been reported after psychotherapy, after treatment with amine oxidase inhibitors, and after psychosurgical operations. Usually it has been assumed that the colitis is the result of the emotional disturbance. There is, however, evidence also that the reverse is true.

It is easy to argue that a patient suffering from intractable diarrhea would be so distressed by the diarrhea that a severe emotional disturbance might ensue. After an ileostomy is performed the diarrhea is con-

trolled, but there is then the psychic trauma of the ileostomy. Persistence of neurotic behavior and hyperemotionalism after ileostomy has been attributed largely to these factors.

It is by no means certain that the diarrhea or the ileostomy is the sole cause of the psychologic disturbances so common in patients with ulcerative colitis. When total colectomy and ileostomy are performed simultaneously, the convalescence of the patient with ulcerative colitis seems to be much more rapid than when an ileostomy is made and the colon is not removed. It often appears that when only ileostomy is done and the colon is later removed, the emotional problems do not subside until the colon has been removed. In patients with congenital polyposis, on the other hand, emotional disturbances are rarely seen after ileostomies. Is it possible that in ulcerative colitis the diseased colon produces some chemical that disturbs the emotional balance of the patients? It is impossible to answer this question, but one thing is certain: patients who have had severe emotional disturbances and have been most uncooperative while their colons were affected with active ulcerative colitis become pleasant and cooperative after their colons have been removed.

IV. GRAVES' DISEASE

Although the colon is not accepted as an organ that regulates personality, the role of the thyroid in this respect is seldom questioned. The emotional disturbances of Graves' disease often are cited as an example of this effect.

There is no denying that patients with Graves' disease are overemotional, hyperreactive, nervous, weepy, tremulous, and excitable. There is, however, some question as to whether all of these effects are the result of thyroid overactivity or whether Graves' disease is a much more complex problem than is hyperthyroidism. Exophthalmos, for example, cannot be produced by hyperthyroidism alone. Exophthalmos does not occur when large doses of desiccated thyroid are fed, or from overactivity of a thyroid adenoma. Localized myxedema of the pretibial area and leukoderma occur in Graves' disease but not in nodular goiter with hyperthyroidism. The emotional disturbances, the flush, the sweating, the tremor, the weeping, the widening of the pal-

pebral fissures, the stare—all of these either do not occur in nodular goiter with hyperthyroidism or if they do occur, are present in a much milder form than in Graves' disease, even when the hyperthyroidism, as measured by protein-bound iodine or basal metabolic rate, is of the same severity.

Following correction of the hyperthyroidism the patient with nodular goiter loses all signs and symptoms of the disease, whereas, in Graves' disease many of the eye signs, the localized myxedema, and often much of the emotional lability may persist. Again, we appear to be dealing with changes of an organic nature, not dependent simply on an excess of thyroid hormone but on a more widespread disturbance of the neuro-endocrine system. It is perhaps no accident that Graves' disease has a familial incidence out of proportion to the over-all incidence of the disease. Here again, it is possible that chemical or genetic factors are causing widespread disturbances of which hyperthyroidism is only a part.

V. CANCER

It might seem farfetched to include cancer in the list of psychosomatic diseases, yet it is possible that cancers of the endocrine system or its target organs are related to disturbances in the central nervous system. In the cockroach, severing of a large nerve that comes from the head causes a rash of tumors to break out on the animal's body. Fibroids of the uterus are related to childlessness and so are endometriosis, chronic cystic mastitis, and cancer of the breast. The mechanism by

which this association is produced is not clear. Do women fail to bear children because they have an endocrine imbalance or does failure to bear children produce an endocrine imbalance? In either case there is a clear association between childlessness, fibroid, endometriosis, cystic mastitis, and cancer of the breast.

In mice, cancers in the endocrine system and its target organs can be produced almost at will by disturbing the endocrine balance. In man, too, there is evidence that disturbances in the endocrine system can cause cancer. In man, however, it is not clear whether or not disturbances at the psychologic level alter the endocrine balance. We do not know, therefore, whether childlessness promotes the development of cancer of the breast or whether the childlessness that is associated with breast cancer is merely a part of the endocrine disturbances that caused the cancer.

VI. SUMMARY

It is apparent from these few examples that the causes of many diseases are far more complex than we have been accustomed to think. Advances in our knowledge of the chemistry of the brain almost certainly will result in a better understanding of diseases of the body. A better understanding of diseases of the body is quite certain to lead to a keener appreciation of the factors that influence thought and behavior.

Body and brain are part of the same mechanism, react with the same kinds of adaptations to their environment, and are physiologically and pathologically inseparable.

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Psycho-Physiological Basis of Anxiety

I. ARTHUR MIRSKY, M.D.

Nothing can induce as much anxiety as the attempt to define the concept and the phenomena of anxiety. Everybody knows what it is. Everybody appreciates its role as a driving force in normal development. Everybody recognizes its potent role in the etiology of physiological, psychological and social derangements. Yet very few can agree on a logically consistent definition which permits distinction between causes, properties and consequences.

Accordingly, for the sake of this presentation, anxiety is arbitrarily defined as a complex, multidimensional response to any event, physical or symbolic, which threatens the physiological, psychological or social integrity of the organism. Since the dynamic stability which characterizes the healthy person is the result of continuous flux within and between molecules, cells, organs, individuals and societies, the response to noxious events may be expressed at any and/or all levels of organization. The description of the response will depend upon the conceptual and technical tools available to the observer. The biochemist may see anxiety as some physical-chemical aberration; from intramolecular rearrangements that influence the specificities of enzymes and substrates, to intracellular derangements that disturb the hierarchy of the velocity reactions responsible for intracellular harmony. The physiologist may see anxiety as some derangement in regulation; from excessive facilitation or inhibition of synaptic transmission, to increased or decreased secretion of humorally transported agents. The psychoanalyst may see anxiety as some derangement in ego function; from an explosive discharge of libidinal impulses from the id, to a failure in the autonomous function of the ego. The sociologist, the anthropologist, the philosopher, the historian, and the proponents of other disciplines, may see anxiety in terms of roles, values, ethics, mores, attitudes, cults and other terms specific to their particular bias. The

clinician, however, must see anxiety in terms of a dynamically interrelated constellation of all levels of organization when he is confronted with the patient who is suffering with very vague fearful feelings of apprehension, uncertainty, confusion, agitation, and other evidences of the unpleasant experience of pervasive mounting tension. Even when the subjective manifestations are masked in phobic and other psychological defenses, or exhibited in focal and diffuse physiological concomitants, or expressed in the "acting-out" of aberrant behavior, the clinician must recognize the basic syndrome and distinguish the precipitating and predisposing events.

It would be quite redundant to detail the differences between realistic, signal, neurotic and psychotic anxieties. Suffice it to say that whereas the threat that precipitates the response is from without in realistic and signal anxiety, it is from within in neurotic and psychotic anxiety even though it may be activated by some environmental event. Whereas in the former the individual is induced to escape from the offending event, such escape is impossible in neurotic and psychotic anxiety.

Environmental events are perceived through the screen of past experiences, i.e., by apperception. The apperceptive process wherein a present percept is matched with memory images of events associated with past percepts gives the environmental event some specific meaning to the particular individual. Thus, the meaning of an external circumstance, is determined by the quality and quantity of early social experiences, by the degree with which early percepts were gratified or frustrated, and by the adequacy with which they have become integrated into the constellation of adaptive devices that constitute the reality oriented adult ego. Whereas the various functions of the ego, such as reality-testing and symbol formation, are probably dependent upon the parietal lobes of the cerebral cortex, the apperceptive process probably depends upon the activity of the temporal lobe.¹

Although the phylogenetically recent neocortex is the site of the many processes subsumed as ego functions, it is in the primitive

From the Department of Clinical Science, University of Pittsburgh, School of Medicine.

Presented at the Sixth Annual Meeting of the Academy of Psychosomatic Medicine at Cleveland, Ohio.

cortex, the archipallium, and particularly in the limbic lobe, that the earliest patterns of affective experiences are elaborated and stored. As MacLean² has emphasized, the limbic lobe is the common physiological denominator of a variety of emotional and viscerosomatic functions; it is a visceral brain in that it is concerned with ongoing bodily processes. This primitive cortex is intimately connected to many subcortical cell stations and together they comprise the limbic system. The limbic system has rich connections with the neocortex above, and with the hypothalamus and the reticular formation of the midbrain below. The frontotemporal portion of the limbic system is largely concerned with mechanisms involved with functions subsumed as "self-preservation" while parts of the septum, hippocampus and cingulate gyrus are concerned with functions essential for preservation of the species.³ Environmental events that are interpreted, through apperception, as threats to either set of functions, activate the limbic system and thereby induce the feelings that characterize the affect of anxiety.

It is pertinent to note that the limbic system in its most primitive form is part of the olfactory system. This suggests that the entire affective system developed first as a component of the olfactory sensory system and later became available to apperception by other sensory modalities. Although olfactory perception does not appear to be important in the adult human, it may be quite significant in the infant who, like other mammals, has a marked acuity to olfaction.⁴

Studies on the physiology of the limbic system and its various connections, make it evident that the subjective significance of a percept is dependent also upon activation of the reticular formation of both the brain stem and the thalamic nuclei which receives collaterals from all sensory modalities. Since activation of this system results in a generalized excitation of both the old and new cortex, it is frequently referred to as the reticular activating, arousal, or alerting system.⁵ The integrity of this system determines sleep and wakefulness, relaxation and tension. It is the alerting action of this system that appears to be responsible for the excitation that is subjectively perceived as mounting tension. Thus, appropriate dosages of various pharmacological agents such as amphetamine, pipradol,

iproniazid, etc., which activate the reticular system also induce the affective response of anxiety.⁶ In contrast, agents which tend to inhibit the reticular system also reduce the intensity of anxiety and thereby serve as "tranquillizers."

Cannon's classical observations provided the first definitive data on the mechanisms that may be involved in the production of the physiological concomitants of anxiety.⁷ He found that exposure of animals to situations which induced fear or anger resulted in a sequence of vascular, respiratory, metabolic, muscular and other events which could best be understood in terms of a physiological preparation for flight or fight. Cannon demonstrated that these responses were reflexive in nature and due to activation of the orthosympathetic outflow from the hypothalamus and the release of epinephrine from the adrenal medulla. In accord were the observations on the physiological responses of decorticated dogs which exhibited behavior analogous to that of enraged animals, i.e., "sham rage." Since he could not explain all his findings on the basis of epinephrine alone, Cannon postulated the existence of two other sympathomimetic substances, sympathin E and sympathin I. Sympathin E is now known to be nor-epinephrine which differs from epinephrine only in the absence of the N-methyl group. Although both hormones may be released from the adrenal medulla, the major source of nor-epinephrine is the orthosympathetic nerve ending itself. In contrast to epinephrine which induces the profound physiological changes that characterize the "emergency response," the major effect of nor-epinephrine is a general vasoconstriction. An additional catecholamine, isopropyl nor-epinephrine (isoproterenol), has been identified more recently as the predominant transmitter of the bronchodilator fibers of the cat.⁸ It is quite possible that a family of such catecholamines may be involved in various neuronal processes.

Since many of the physiological concomitants of the anxiety reaction in man appear to be identical to those associated with fear and anger induced in the experimental animal, it was assumed that the same processes were involved in the development of anxiety in man. In accord is the increased secretion of epinephrine and nor-epinephrine by patients suffering with anxiety and by healthy subjects

after exposure to an anxiety-provoking event.⁹⁻¹¹ Likewise, this hypothesis is supported by the evidence that the administration of epinephrine to man induces the various psychologic and physiologic manifestations of anxiety.¹² Yet the widespread physiological and biochemical changes that characterize the "emergency" reaction occur only in patients with the most profound degrees of anxiety. In most instances, the physiological concomitants of anxiety vary markedly in intensity from subject to subject. In some instances the affective response may be profound while the physiological concomitants are minimal; in others the affect may be minimal while the physiological response is quite marked. Further, the somatic response to a noxious stimulus appears to be specific to the particular individual, i.e., each subject has his own unique pattern of somatic responses.¹³⁻¹⁷ Similarly, the affective and autonomic responses to exogenous epinephrine vary from person to person and tend to be characteristic for each individual.¹²

Cannon's observations suggested that the same mechanisms were involved in the responses associated with fear and with anger. Subsequent studies with man, however, revealed significant differences between the physiological responses associated with fear and with anger.¹⁷⁻¹⁹ Ax's observations¹⁸ on the character of the differences in the physiological reaction patterns led to the suggestion that the response associated with fear resembled that produced by epinephrine while the response associated with anger resembled that due to a combination of epinephrine and nor-epinephrine. More recently, Funkenstein and his colleagues²⁰ proposed that subjects who respond to a particular situation with anger which is directed outward, i.e., with the "fight" reaction (aggression), activate the excessive secretion of nor-epinephrine and exhibit relatively minimal physiological reactions. In contrast, individuals who respond to the same situation with anger directed towards themselves or with severe anxiety generated by hostile impulses, i.e., the "flight" reaction (submission), activate the excessive secretion of epinephrine and exhibit the generalized reactions described by Cannon. Aggression is thus related to the secretion of nor-epinephrine and anxiety and fear to the secretion of epinephrine.

Although the homeostatic significance of a minimal physiological preparation for aggressive action and a maximal preparation for submissive action suggested by Funkenstein's conclusions remains a problem, these observations suggest some degree of specificity in the response to affects. In accord is the demonstration that stimulation of certain areas of the anterior hypothalamus of animals results in the liberation of epinephrine and the development of manifestations of fear and/or anxiety. Stimulation of the posterior hypothalamus results in the liberation of nor-epinephrine and the development of behavior analogous to rage and/or aggression. It is pertinent to note, however, that in general the orthosympathetic-adrenal medullary response is mediated by nuclear groups of cells in the posterior hypothalamus, while the parasympathetic response is mediated by cells in the anterior and latero-mesial hypothalamus.

That the parasympathetic system may be involved also in the fear-anxiety response is suggested by many observations,²¹ and especially by recent studies of so-called "voodoo death." Richter's experiments with wild Norway rats suggest that a massive parasympathetic discharge may result in ventricular fibrillation when the animals are placed in a "hopeless" situation from which there is no escape.²² In accord also is the vagotonia and the resultant vasodepressor syncope that is so frequently observed after an otherwise innocuous venipuncture in men who exhibit no evidences of discomfort in other, more anxiety producing, situations.²³ Some explanation for this phenomenon may come from the following study that is still in progress.²⁴

Monkeys were exposed to the sight of a specific symbol for several seconds and then given a painful stimulus. Another symbol was not followed by pain. They were conditioned to avoid the painful stimulus by pressing a bar as soon as they saw the positive symbol which served as the conditioning stimulus. Continuous heart rate measurements revealed the development of a marked tachycardia with exposure to the sight of the positive symbol but not with exposure to the negative symbol. When the conditioned avoidance response was well established, the animals were exposed to the same stimuli for several seconds as well as at speeds as low as 0.7 milliseconds. Whereas the animals pressed the bar and ex-

hibited a tachycardia on exposure of the positive symbol for several seconds, they did not press the bar and developed a bradycardia when they were exposed to the positive symbol for a very short interval.

Since the animals were conditioned to press the bar when exposed to the positive symbol for several seconds, it may be postulated that this avoidance response is a measure of the animals' "awareness" of the stimulus. The absence of such a response to the rapid presentation of the same stimulus may be inferred to mean that the animal is not aware of the presented stimulus. The bradycardia that ensues after the rapid presentation of the stimulus, however, suggests that stimulus was "registered" or reacted to even though the animal was apparently unaware of its existence. Thus a parasympathetic response may occur on exposure to a fearful environmental stimulus which does not reach awareness.

Consequent to studies by Selye and others it became apparent that the same stimuli which induce the "emergency response" of Cannon also result in the release of adrenocorticotropin by the adenohypophysis, stimulation of the adrenal cortex and the secretion of corticosteroids into the circulation.²⁵ This sequence of events is generally attributed to excitation of the hypothalamus and the secretion of a chemical agent which is transported through the hypophyseal portal veins to the adenohypophysis. Although the precise nature of the chemical mediator is unknown, there is much to suggest that it belongs to a family of polypeptides which constitute or are associated with the neurosecretory material produced by the paraventricular, supraoptic and other nuclei of the hypothalamus and stored in the neurohypophysis. Characteristic of such peptides are vasopressin and oxytocin.

The involvement of the hypothalamic-neurohypophyseal system in the physiological response to noxious stimuli is revealed in the demonstration that exposure to physical or emotional stimuli which are noxious to animal or man results not only in an activation of the autonomic nervous system and the discharge of ACTH but also in an inhibition of the diuresis induced by the ingestion of water^{26,27} and an increase in the antidiuretic activity of the blood.²⁸ Concomitant with the antidiuretic response is a marked depletion of both the neurosecretory material and of pharmaco-

logically active vasopressin in the hypothalamus.^{29,30}

The rapidity with which the antidiuretic activity of the blood is increased in response to a noxious stimulus, the rapidity with which the hypothalamus is depleted of its neurosecretory material and the relatively longer latent period after such exposure before evidences of adrenocorticotrophic activity appear, prompted the hypothesis that vasopressin is the corticotropin-releasing factor.^{29,31,32} Although a good deal of evidence can be marshalled in support of this hypothesis,³³ it now appears more likely that some other closely related peptide may be the specific factor.^{34,35} Moreover, it is conceivable that there may be a number of peptides with the property of activating the release of ACTH. For example, synthetic oxytocin is an octopeptide which differs from arginine or lysine vasopressin only in that isoleucine and leucine replace phenylalanine and arginine or lysine.^{36,37} It has only a minute antidiuretic activity but can exert a corticotropin-releasing action when administered in a dosage that does exert an antidiuretic effect.³⁸ Likewise other synthetic peptides which differ from vasopressin and oxytocin by one or two amino acids exert a corticotropin-releasing action when given in sufficient dosage. It is quite probable that among the 90 or more peptides that have been found in the neurohypophysis³⁹ are some with the structural characteristics which determine the corticotropin-releasing action of vasopressin and oxytocin. It is quite possible also that the various peptides exhibit different physiological activities and serve as neurohormones.

Although little is known concerning the precise nature and function of the various peptides that can be isolated from the hypothalamico-neurohypophyseal system, it is quite possible that they result from the hydrolytic action of some proteolytic enzyme. Such an hypothesis is suggested by the observations of Croxatto,⁴⁰ Braun-Menéndez,⁴¹ Rocha e Silva,⁴² and Masson, et al.,⁴³ which reveal the many pharmacologically active peptides that may be produced "in vivo" in consequence of proteolytic action. Angiotensin, produced by the action of the leucyl-leucine peptidase (renin) on plasma globulins exhibits antidiuretic properties.⁴⁴ Pepsitensin, produced by the hydrolytic action of pepsin on α -2-globulin at a relative alkaline pH, exhibits pressor and oxy-

toxic activities.^{40,41} Pepsanurin, produced by the action of pepsin on various substrates, exhibits marked antidiuretic and slight oxytocic properties. Likewise, a variety of other peptides consequent to the hydrolytic action of plasmin, exert vascular and myotrophic effects.^{42,43} Such hydrolytic products have been found to exert a corticotropin-releasing action.³⁷

It is pertinent to note that plasmin is a proteolytic enzyme which is present in the circulation of man and other species as an inactive precursor, plasminogen. Exposure to a variety of noxious stimuli results in the release of an activator from the tissues which catalyzes the conversion of plasminogen to plasmin.^{40,47} Accordingly, it is quite possible that such exposure will result in the activation of plasmin (or some other proteolytic enzyme) and the formation of peptides with corticotropin-releasing properties not only in the hypothalamus and neurohypophysis but also in the systemic circulation and at the site of injury. This hypothesis provides an explanation for the release of ACTH when animals with transplanted pituitaries are exposed to a systemic insult. Whereas in the latter instance the activation of proteolytic enzymes may result in the systemic production of a peptide with ACTH releasing properties, emotional and other central excitations may induce a similar proteolysis in the hypothalamus and neurohypophysis. In accord is the recent report that the cerebrospinal fluid of men exposed to sustained noxious stimulation contains an enzyme which catalyzes the hydrolysis of globulin and the consequent production of a peptide with myotrophic properties.⁴⁸ Pertinent also is the demonstration of an increased concentration of some proteolytic enzyme in the brains of rats after prolonged painful stimulation.⁴⁹

Stimuli which result in a discharge of vasopressin into the circulation also produce a discharge of oxytocin and a reduction in the oxytocic activity of hypothalamic and neurohypophyseal extracts.⁵⁰ The quantity of each hormone that is discharged, however, may depend upon the specific character of the stimulus to which the organism is exposed. Thus, a slight antidiuretic and a marked oxytocic response occurs in lactating rabbits suddenly exposed to their suckling young.⁵¹ These and other studies suggest that one of the hypothalamic

neurohormones may be responsible for activating the acidophilic cells and another for activating the basophilic cells of the anterior pituitary gland. In agreement is the observation that whereas the discharge of vasopressin or an associated agent from the hypothalamus can be related to the subsequent release of ACTH from the anterior pituitary, the discharge of oxytocin appears to be related to the subsequent release of gonadotropin.⁵²

Besides their postulated role in the activation of the anterior pituitary gland and their known action on peripheral mechanisms, the hypothalamic neurohormones may play a role in the activation of the neuronal centers in the hypothalamus. This is suggested by Cushing's demonstration that the injection of relatively crude preparations of vasopressin into the cerebral ventricles of man results in a massive parasympathetic discharge which can be prevented by the previous injection of atropine.⁵³ It may well be that one of the hypothalamic neurohormones, e.g., vasopressin, activates the anterior hypothalamus with a resultant parasympathetic discharge while another activates the posterior hypothalamus with a resultant sympathetic discharge.

In addition to the aforementioned agents which may be effective as neurohumoral transmitters, a fairly large number of other compounds may be involved in nervous integration. Acetylcholine, nor-epinephrine, adenosine triphosphate, 5-hydroxytryptamine (serotonin), γ -aminobutyric acid (GABA), substance P, and histamine have been considered to exert neurohumoral activities. Currently there is much interest in the role of serotonin. The data developed by Brodie and his associates⁵⁴ have led them to postulate that serotonin is the chemical transmitter of the central parasympathetic system and nor-epinephrine the transmitter of the central sympathetic system.

Irrespective of the mechanisms involved, exposure to threatening events results in the release of hypothalamic neurohormones, adrenocorticotropin, epinephrine, corticosteroids and a variety of other agents. Not only do these agents exert peripheral changes, but they also influence the activity of the central nervous system and thereby enhance the activities of physiological processes associated with anxiety. For example, epinephrine, in addition to its cardiovascular and metabolic actions, increases the responsiveness of the peripheral

tissues to the corticosteroids secreted by the adrenal cortex.⁵⁵ It also activates a component of the reticular formation⁵⁶ and thereby increases the excitation of the cerebral cortex.

The aforementioned considerations are in accord with the consensus that the hypothalamus is the principal subcortical center for the regulation of the mechanisms responsible for emotional expression. Through the rapid activation of the parasympathetic and sympathetic outflows, the hypothalamus regulates the visceral and motor discharges that reflect emotional expression and comprise the "emergency" responses described by Cannon. Through the secretion of neurohormones, it regulates the secretion of the trophic hormones of the anterior pituitary and thereby the responsiveness of the peripheral systems and slower metabolic phenomena that comprise the "General Adaptation Syndrome" described by Selye. Through the interaction of both neuronal and hormonal influences are initiated the sequence of physiological events which are essential to homeostasis but which may lead to clinical derangements in the susceptible individual.

Although there is a paucity of information about the precise physiologic mechanisms responsible for the somatic and psychologic expression of anxiety, still less is known about the processes responsible for the predisposition to anxiety. That a variety of genetically determined patterns of behavior may play a role in such predisposition is quite evident from direct observations of infants as well as from studies of animal behavior. The ethologists offer many examples of the innate character of behaviors associated with the anticipation, perception and reaction to dangerous situations.⁵⁷ It is quite possible also that the sudden change from the environment of the uterus to the environment of the physical and human world induces physiological changes which serve as the prototype of anxiety.⁵⁸ However, the most important predisposing determinant in man is the manner whereby the child learns how to learn to make appropriate relations with others. This is evident in the frequency with which some disturbance in "object-relationships" precipitates the anxiety reaction in man.

It would take us too far afield to review the various forms of learning that may be involved. Likewise it is impossible to survey

the mass of observational and experimental evidence that reveals the prepotent influence and persistent effects of traumatic experiences during the early life of animal and man. It is pertinent to note, however, that the neonate, with his anatomically still immature neopallium, appears to respond like the decorticated dog to all interoceptive, proprioceptive and exteroceptive stimuli of sufficient intensity with an activation of the archipallium and discharge through the hypothalamus. This results in the diffuse uncoordinated visceral and muscular activity that characterizes the reaction of the neonate to hunger and other physiological needs as well as to painful apparently noxious stimuli. This massive response is similar in many respects to that which characterizes the anxiety reaction.

The response of the neonate to hunger, for example, is essentially an unconditioned response of the central nervous system to the diminution of essential nutrients in the circulation and the resultant changes in the rates of various biochemical processes in the cells, presumably, of the limbic system and the hypothalamus. Likewise, the cessation of the muscular activity which ensues after feeding is an unconditioned response to the absorbed nutrients. At first neither response has any "emotional" significance. They attain emotional significance when they have become associated with specific environmental events. Such associations are dependent upon the maturation of the physiological systems of the neopallium which permit symbolic elaborations and upon the character of the social experiences which provide the substrate for symbols. Since maturation of the cerebral cortex is not attained before about three months of age, it is quite fallacious to postulate that psychic elaborations of physiologic tensions can occur before that age.

Neonates vary markedly in their spontaneous motor activity as well as in the degree with which they respond to physiologic needs and external stimuli. Such variations in visceral and motor activities suggest that infants differ in the responsiveness of their nervous systems to interoceptive and exteroceptive stimuli. Such differences in neural excitability may play a role in the subsequent development of a predisposition to anxiety.

Although it is the effect of the ingestion of food rather than to the mere filling of the

stomach that is responsible for satiation, the ingestion of food and the provider of the food become associated with the physiological tension-reducing effects of feeding and thereby take on the emotional significance of "pleasure." Only after such an association has been established can the increase in physiological tension consequent to the hypothalamic discharge induced by hunger, etc., take on the affect of "displeasure." Thus, the repetitive cycle of mesencephalic and diencephalic excitation, increased motor and visceral tonus, ingestion of food, and decreased physiological tension gradually leads to the recognition that the release of tension is the result of a series of events which take origin in the external world. This is a conditional form of learning.

The satisfaction of nutritional and other physiologic needs, however, is not enough. This is evident in the devastating effects of maternal deprivation during the first few years of life on the perceptual, social, intellectual and even physiological development of the child. During the period when the organization of perceptual and behavioral patterns are still quite plastic, the infant must have a variety of experiences through an "emotional symbiotic" relationship¹⁰ with a mother in order to develop the ability to form adequate relations with the external world. Although psychoanalytic reconstructions, as well as direct observations of infants, have revealed the importance of visual, olfactory, tactile and other experiences, experimental evidence was not available until the relatively recent observations by Harlow and his colleagues.¹¹

Infant macaque monkeys were separated from their mothers at 6 to 12 hours after birth and suckled on tiny bottles. Within the next few days, two inanimate mother surrogates were put in the infant's cage. These surrogates consisted of a wire-mother and a soft terry-cloth-mother and were constructed in such a manner that either could serve as the source of milk. Harlow demonstrated that irrespective of which surrogate served to suckle the infant, it was on the soft, warm cloth-mother that the infant spent most of the time. A variety of experiments established that infants reared with terry-cloth-mothers develop less emotionality than those reared with wire-mothers. The fear-reducing effect of the terry-cloth-mother is revealed when an infant monkey is placed in a strange

environment containing objects which induce fear. In such a situation the infant is extremely fearful and makes no effort to explore the environment. In the presence of the terry-cloth-mother, however, there is relatively little fear and a good deal of exploratory activity. To date it appears that the effect of such experiences in the monkey is a persistent one.

Harlow's brilliant experiments reveal that factors other than "tension-reduction" are also involved in the establishment of "object-relations." His observations validate some inferences derived from clinical observation to the effect that such phenomena as clinging to mother,¹² following mother visually and later by locomotion,¹³ smelling mother, hearing mother, etc., are all essential to the integration of the sensory modalities through which the external world is perceived. As noted above, deprivation of such experiences not only result in an impairment of physiologic, psychologic and social development but undoubtedly also plays a role in establishing the predisposition to anxiety.

Subsequently, exposure to experiences which mobilize or intensify unconscious wishes that have persisted since infancy or which reactivate unconscious memories of unpleasant or which induce conflict between opposing impulses, serve as precipitating events. Among such experiences is the development of some disease, the loss of a loved relative, the loss of the means through which prestige was maintained and a disturbance in a variety of other ecologically significant relations. The resultant psychologic reaction may induce the same neurophysiologic response as occurs in the infant before he develops a completely myelinated neopallium. Our knowledge of the psychologic determinants of the predisposition and precipitation of anxiety is still quite fragmentary. Our ignorance of the biochemistry and physiology of such predisposition and precipitation is abysmal.

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Antidepressants - 1959

FRANK J. AYD, JR., M.D.

The year 1959 is unique in the annals of psychopharmacology because during July and August, five new antidepressants, Catron, Marplan, Nardil, Niamid and Tofranil, were introduced. This unprecedented phenomenon augurs well for victims of melancholia but constitutes a major challenge for the practitioner who must promptly acquire a familiarity with this new class of drugs which will enable him to prescribe them wisely.

Catron, Marplan, Nardil and Niamid, like their predecessor Marsilid, are amine oxidase inhibitors whose antidepressant action is ascribed to their enzyme regulatory activity, estimated to be 10 to 30 times greater than Marsilid. Despite this enhanced capacity to inhibit brain monoamine oxidase these new drugs are said to be safer than Marsilid, the toxicity of which is well known. These enzyme inhibitors are hydrazine derivatives. Tofranil is an iminodibenzyl derivative. It is not an amine oxidase inhibitor and its mode of action in relieving depression is unknown.

The differential effects of these antidepressants has been determined by an analysis of their clinical action in 601 ambulatory and hospitalized psychiatric patients who were matched for each drug studied according to age, sex, diagnosis, severity and duration of illness, and prognosis. All patients were chosen because depressed mood, psychomotor retardation, loss of interest, feelings of guilt, insomnia, anorexia, and functional somatic complaints were the predominant symptoms of their illness. Diagnostically, they were classified: manic-depressive depressed, involutional melancholia, schizophrenic reactions with depression, and neurotic depression. Clinically some were retarded; others agitated or anxious. Their age span was 22 to 80. Approximately two-thirds were not and one-third were psychotically depressed. The minimum number of patients administered each drug was 50; the maximum 201. They were treated for six weeks to two years.

From Franklin Square Hospital, Baltimore, Maryland.

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The starting dose for each drug was based on the clinical estimate of the severity of the target symptoms; subsequent dosage was increased or decreased within two weeks depending on the clinical response and tolerance of the individual patients. The initial daily dosages were: Catron 12 to 24 mg.; Marplan 30 to 60 mg.; Nardil 30 to 60 mg.; Niamid 30 to 75 mg.; and Tofranil 75 to 150 mg. The maximum daily dosages were: Catron 60 mg.; Marplan 120 mg.; Nardil 150 mg.; Niamid 200 mg.; and Tofranil 250 mg. Some retarded depressives were given Dexedrine or Ritalin in addition to the antidepressant; others were not. All schizophrenics, and every anxious, agitated non-schizophrenic took a phenothiazine derivative (Stelazine or Permitil) concomitantly with the antidepressant. Whenever insomnia was severe, barbiturate hypnotics also were prescribed.

The criteria for improvement for each drug were: (1) marked improvement—total disappearance of depressive symptoms and (2) moderate improvement—25-75% modification of the target depressive symptoms. By these standards at the end of two months the improvement rates were: Tofranil 73%, Catron 64%, Marplan 61%, Nardil 58% and Niamid 55% (Table I).

An analysis of these therapeutic results revealed that when these drugs helped, improvement began in the first month. The earlier a beneficial change occurred, the better was the ultimate outcome; the longer it took for therapeutic effect, the poorer was the final result. Also, the smaller the dose needed to elicit improvement, the more optimal was the result;

TABLE I
Comparison of Therapeutic Results With Various Antidepressants

Drug	No. Pts.	Improved		
		Improved	Partially Improved	Unimproved
		%	%	%
Marsilid	201	24.8	33.4	39.8
Catron	50	26	38	36
Marplan	100	27	34	39
Nardil	50	26	32	42
Niamid	100	24	31	45
Tofranil	100	25	48	27

the larger the dose required for benefit, the less favorable was the ultimate outcome. Failure to improve within a month indicated the need for some other therapy even though an occasional patient responded to further treatment with the same compound.

Although each drug exerted its beneficial effects within a month, there was a difference in their speed of action. Some patients began to improve as early as the third treatment day but as a rule Tofranil and Catron were the fastest acting, their therapeutic effects becoming evident in 4 to 10 days; Marplan's benefits appeared in 7 to 14 days; Nardil required 10 to 20 days to produce its effects; and Niamid was the slowest acting, its favorable action appearing between 14 to 21 days.

For each drug there was a correlation between the total daily dosage and therapeutic results. To achieve improvement with Tofranil a minimum of 75 mg. a day was necessary. The most effective daily dosage was 150 mg. Larger doses helped an exceptional patient attain partial modification of depressive symptoms, although the evidence to date suggests that dosage in excess of 150 mg. daily does not benefit a patient who is unresponsive to lesser amounts (Table II).

TABLE II
TOFRANIL

Correlation of Therapeutic Results With Daily Dosage

Daily Dose (mg.)	No. Pts.	Improved	Partially Improved	Unimproved
75	5	1	2	2
100	12	3	4	5
125	18	4	12	2
150	59	17	29	13
200	5	0	1	4
250	1	0	0	1
Total	100	25	48	27

The highest ratio of improvement with Catron was in patients on 12 mg. daily while doses up to 24 mg. a day were needed by some patients to achieve benefit. Higher doses were seldom helpful and increased the incidence and severity of side effects (Table III).

The manufacturer's recommended effective daily dose for Marplan is 30 mg. In this study a significant number of patients required 40 mg., 60 mg., or 90 mg. a day to achieve therapeutic benefit. Doses in excess of 90 mg. daily were rarely helpful (Table IV).

The most effective daily dose of Nardil was 45 mg. although occasional patients needed 60 mg. a day to attain improvement. Further increases of the total daily dosage were seldom beneficial and invited the risk of troublesome side effects (Table V).

The daily dosage-therapeutic result relationship for Niamid was 50 mg. a day minimum; 125 mg. maximum; the most effective daily dosage being 100 mg. Administration of more than 150 mg. a day was generally ineffective (Table VI).

Neither sex, age nor duration or severity of illness influenced the therapeutic outcome. The best results were achieved in patients who

TABLE III
CATRON
Correlation of Therapeutic Results With Daily Dosage

Daily Dose (mg.)	No. Pts.	Improved	Partially Improved	Unimproved
12	30	10	15	5
18	10	2	2	6
24	4	1	1	2
30	2	0	1	1
36	2	0	0	2
48	1	0	0	1
60	1	0	0	1
Total	50	13	19	18

TABLE IV
MARPLAN
Correlation of Therapeutic Results With Daily Dosage

Daily Dose (mg.)	No. Pts.	Improved	Partially Improved	Unimproved
30	67	18	21	28
40	19	5	6	8
60	15	3	4	8
90	7	1	2	4
120	2	0	1	1
Total	100	27	34	39

TABLE V
NARDIL
Correlation of Therapeutic Results With Daily Dosage

Daily Dose (mg.)	No. Pts.	Improved	Partially Improved	Unimproved
30	5	1	1	3
45	28	10	10	8
60	12	2	4	6
90	3	0	1	2
120	1	0	0	1
150	1	0	0	1
Total	50	13	16	21

TABLE VI
NIAMID
*Correlation of Therapeutic Results With
Daily Dosage*

Daily Dose (mg.)	No. Pts.	Improved	Partially Improved	Unimproved
50	10	2	2	6
75	44	11	15	18
100	32	10	11	11
125	5	1	1	3
150	5	0	2	3
200	4	0	0	4
Total	100	24	31	45

were sad, apathetic and inhibited (retarded endogenous depression) and the poorest were in those who were agitated, hypochondriacal and neurotic. Likewise these drugs were of limited value in senile patients and in chronic depressives who had been resistant to other forms of antidepressant treatment including electroshock therapy.

When improvement occurred, inhibition and inertia were affected first; mental stress and anxiety secondary to depression were relieved later. Non-depressive anxiety and agitation were not abated by these drugs; instead they were aggravated unless a phenothiazine tranquilizer was administered concurrently.

In all conditions, except endogenous depressions, only the depressive symptoms were allayed while the basic psychiatric ailment was not affected. This was especially true of schizophrenics in whom delusions and hallucinations persisted. Schizophrenics, in particular, needed combined antidepressant-tranquilizer therapy since the antidepressant alone occasionally caused aggressiveness, hostility, agitation and assaultiveness. Similar shifts in psychosis also occurred in manic-depressive patients who swung from a depression to mania. These experiences emphasize the need for close supervision of patients treated with antidepressants, especially since depressive symptoms frequently mask an underlying schizophrenia which even an experienced psychiatrist may miss.

Included in therapeutic failures were a few patients on each drug who began to respond, then relapsed and were subsequently resistant even to large doses. Invariably these patients did not begin to improve until the fourth week. Clinically they were neurotic depressives (more often chronically ill than not),

who had multiple somatic complaints and who had reacted similarly or not at all to prior antidepressant therapy including electroshock therapy.

A comparison of the therapeutic results in those given an antidepressant along with Dexedrine or Ritalin with those on an antidepressant alone showed no significant difference between the two groups. The analeptic did seem to diminish subjective awareness of enervation, but once the antidepressant began to take effect, the analeptic could be discontinued without loss of therapeutic gain. In a few cases the analeptic seemed to catalyze the stimulating effect of the anti-depressant to such a degree that it had to be withdrawn and a tranquilizer substituted.

The therapeutic failures with each drug were divided into groups and each group subsequently was treated for eight weeks with the most effective daily dosage of another antidepressant. In this way patients resistant to one antidepressant were tried on each of the other compounds. This experiment revealed that a patient who was unresponsive to one antidepressant seldom respond more than partially to another. Whether the marked improvement seen in the exceptional patient who responded to a second antidepressant occurred spontaneously or because of the drug could not be determined.

The combination of Tofranil and an amine oxidase inhibitor and one enzyme inhibitor with another also has been tried to determine efficacy and safety. This experiment disclosed no evidence of synergistic action with regard to side effects or therapeutic results. The incidence and severity of side effects were the same and the therapeutic results were no better than those obtained with one antidepressant.

Although these drugs have lessened the need for ECT, shock therapy combined with each of these drugs has been employed on occasion. This combined treatment is safe, but whether it reduces the number of shock treatments required is debatable. Large series of patients treated in this manner must be assembled before it can be stated categorically that combined ECT-antidepressant therapy reduces the number of shock treatments needed.

An antidepressant which has been effective cannot be stopped until the depression has resolved and discontinuation of the medication

before three months after maximum improvement invites the risk of relapse. If this happens the patient may or may not react to the same drug. Ideally, dosage should be lowered gradually and the drug not withdrawn until the patient has been well from four to six months. A resurgence of depressive symptoms may occur when the dosage is reduced, necessitating resumption of the previous therapeutic dose for several more months.

It is apparent that prolonged antidepressant therapy will be needed for many patients. This raises the question of the safety of long-term treatment with each of these drugs. A comparison of the pretreatment hematologic and liver function studies (alkaline phosphatase, direct and indirect serum bilirubin and cephalin flocculation) with the same lab tests after six months in 50 patients treated with Tofranil, Marplan, and Niamid showed no statistically significant difference as measured by the Student's "t" Test. A similar comparison of lab tests in a small series of patients treated with Catron and Nardil also revealed no evidence of deleterious effects from these drugs. The laboratory evidence to date suggests that prolonged antidepressant therapy is reasonably safe.

Unless absolutely necessary the amine oxidase inhibitors should not be abruptly terminated if the patient is receiving more than the initial daily dose or if the drug has lowered blood pressure. In a few patients sudden withdrawal of the medication led to a rebound cardiovascular reaction characterized by a rise in blood pressure above the pretreatment level, some tachycardia and precordial discomfort. It is possible that sudden discontinuation of an amine oxidase inhibitor could precipitate a coronary or cardiac failure.

Experimental pharmacological studies indicated that each of these compounds exerted varying degrees of somatic reactions. In humans these drugs tend to induce similar somatic reactions but their incidence and severity varies with each drug (Table VII).

Of the amine oxidase inhibitors Marsilid caused more, and, in general, the most serious side effects. Marplan, an analogue of Marsilid, paralleled it in type and frequency but not in severity of side effects, those due to Marplan being milder. The side reactions of Catron and Nardil also were less intense than those due to Marsilid except that Catron pre-

TABLE VII
Side Effects Due to Antidepressants

	Catron	Marplan	Nardil	Niamid	Marsilid	Tofranil
<i>No. of Patients</i>	50	100	50	100	201	100
Headache	10	12	12	10	19	15
Dizziness	38	40	42	3	46	36
Blurred vision	18	26	20	2	27	20
Dry mouth	36	36	40	4	50	42
Postural hypotension	6	8	6	2	11	2
Epigastric distress	16	14	18	2	18	8
Constipation	20	10	30	3	56	40
Diarrhea	0	2	0	1	7	2
Delayed micturition	0	3	2	2	11	2
Altered erotic desires ..	8	9	6	1	9	7
Impotence	0	1	2	0	3	2
Weakness and fatigue	32	37	30	9	39	34
Edema	0	4	0	1	11	0
Sweating	10	9	12	4	11	33
Muscle tremors	0	0	0	0	7	9
Dermatitis	0	1	0	0	4	2
Increased psychomotor activity	4	0	0	0	4	1
Hepatomegaly	0	1	0	0	1	0
Insomnia	16	5	4	0	9	3

cipitated more insomnia and increased psychomotor activity. Niamid caused the fewest side effects. Structurally, Niamid differs from the other inhibitors in that it contains benzyl-carboxamido group. It has been suggested that it is this part of the molecule and the manner in which Niamid is metabolized that accounts for its paucity of side reactions.^{1,2}

The type and frequency of side effects were related partly to dosage but mainly to individual susceptibility. Every patient had some somatic reaction to these drugs, but some had greater reactions on very low doses than others did on very high doses. Moreover, some individuals had side effects early while others had them only after they had taken the medicine at least two weeks. Age influenced the incidence of side reactions since the older the patient was the more likely were they to occur. This is especially true of dizziness, postural hypotension, altered bowel function, delayed micturition, edema and muscle tremors.

Some clinicians have questioned whether some of the somatic reactions imputed to antidepressants are side effects and not symptoms of the depression itself.³ The side reac-

tions tabulated in Table VII did not exist prior to the drug's prescription, subsided as the dosage was lowered, disappeared when the medicine was stopped in unimproved patients and recurred when another antidepressant was administered. They occurred also in normal volunteers who took these compounds. In fact, patients and volunteers who had side effects to one monoamine oxidase inhibitor almost invariably had identical reactions to any other they took, the only difference being in the time required for them to appear.

Most side effects of these drugs were not serious, seldom required counteracting measures and eventually subsided as the medication was continued. Some side effects were potentially serious and warranted either remedial action or prompt discontinuation of the agent.

The blood pressure response to these drugs was variable and unpredictable. All patients with systolic pressures below 100 mm. Hg. showed no change or a rise in blood pressure. Most normotensive patients had no blood pressure alteration, while some had an average rise of 20 mm. Hg. or an average drop of 28 mm. Hg. Likewise, the majority of hypertensive patients had no blood pressure change, while some had an average decrease of 30 mm. Hg. and a few a slight rise in pressure.

Postural hypotension, a hazardous complication of the amine oxidase inhibitors, was unrelated to dosage or pretreatment blood pressure. Its incidence and severity was considerably less than with Marsilid. It also was more easily mitigated by dosage reduction and/or Dexedrine. When these measures failed, Cortisone 12.5 mg. one to three times daily or ACTH 20 to 40 units a day for two to five days, was effective.

Urinary retention secondary to bladder atony developed insidiously after the second treatment week. This necessitated withdrawal of the antidepressant, medication to restore bladder tonus and in a few patients an indwelling catheter. Even after the antidepressant was stopped a week or more of treatment was needed before normal bladder function returned.

Side effects were more disturbing to schizophrenics and neurotic depressives, especially those who did not improve. With the exception of Marsilid none of these drugs produced euphoria or toxic psychokinetic stimulation. Ca-

tron increased energy and reduced need for sleep, but, in contrast to amphetamines, it took longer to take effect, did not raise blood pressure unduly, suppress appetite, cause weight loss or subsequent depression.

COMMENT AND CONCLUSION

The new antidepressants represent a significant advance in the treatment of all types of melancholia, especially the retarded endogenous depressions. The proper prescription of these drugs produces a progressive disappearance of the signs and symptoms of depression with a miniscule of risk because of their relative freedom from major side effects even with prolonged use. Their most serious drawback is their general slowness in taking effect which makes their use hazardous for severely depressed suicidal patients who, preferably, should be treated with electroshock therapy. Otherwise these compounds can be a satisfactory substitute for shock therapy for most depressed patients.

The effectiveness and safety of these drugs does not license a physician to be casual about his ministrations to a depressed patient. Careless use of antidepressants could increase the risk of suicide and an aggravation of other mental ills masked by depressive symptoms. This would be an indictment not of the drug but of the prescribing physician.

Unfortunately these newer antidepressants are not universally beneficial and the need for more effective treatment of melancholia exists. This is not a detraction from these truly remarkable drugs for in addition to their therapeutic properties they have and will contribute much to our knowledge and understanding of the foundations of human behavior.

6231 York Road, Baltimore 12, Maryland.

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Notes and Comments

Editorial Board for Psychosomatics

By the time the second issue of the journal reaches you, selection of our Advisory Editorial Board should be completed. This group is drawn from the world of medicine at large and will consist of distinguished leaders in the field of medical education and writing who have consented to serve the journal in an advisory capacity. The Associate Editors, all of whom are members of the Academy, have been chosen on the basis of both geographical and specialty considerations, as well as interest in active participation in the journal. Appointments are for one year and require the contribution of abstracts, book reviews and other pertinent material. The Associate Editors will also review material submitted for publication. Fellows and Associate Fellows of the Academy are therefore encouraged to appoint themselves as contributors; abstracts, reviews, news notes and original papers will all be carefully considered by the members of the Editorial Board for publication.

The following distinguished physicians have accepted appointments to the Advisory Editorial Board:

Dr. Morris Fishbein, Chicago; Editor of *Excerpta Medica*; Editor of *World-Wide Abstracts*; President of the American Medical Writers' Association; formerly Editor of the *J.A.M.A.*

Dr. Richard H. Orr, New York City; Director of the Institute for Advancement of Medical Communication; President, New York Chapter, American Medical Writers' Association; Editor of *Metabolism*.

Dr. William Sargant, London, England; Physician in charge of Psychological Medicine, St. Thomas's Hospital; Consultant Psychiatrist, Belmont Hospital, Sutton, England; President, Section of Psychiatry, Royal Society of Medicine, London, 1957; Author of "Battle for the Mind," and "Introduction to Physical Methods of Treatment in Psychiatry"; recipient of the Purdue Frederick Travel Award (1959) which incidentally enabled him to address the Academy of Psychosomatic Medicine at the October 1959 meeting in Cleveland.

Dr. Yujiro Ikemi, Japan; Associate Professor of Medicine, Kyushu University, Fukuoka City, Japan; Organizer and Founder of the Japanese Psychosomatic Society in November 1959. Dr. Ikemi will not only serve as an Advisory Editor, but will also supply the journal with pertinent material from the Japanese literature (in English).

Dr. Milton Plotz, Brooklyn, N. Y.; Professor of Medicine, State University of New York,

Downstate Center; Attending Physician, Chief of Cardiac Clinic, Consultant Cardiologist at Bushwick Hospital; Attending Physician, Kings County Hospital; Consultant, Brooklyn State Hospital, Jewish Board of Guardians, New York City Department of Welfare; Director of Medicine, Linden General Hospital; author of numerous articles and a text-book on coronary disease; participant in the Obesity and Cardiovascular Disease panel at 1959 meeting of the Academy of Psychosomatic Medicine.

Dr. Franklin G. Ebaugh, Denver, Colo.; Clinical Professor of Psychiatry, University of Colorado Medical School, Denver; Associate Editor, *American Journal of Psychiatry*; Associate Editor, *Diseases of the Nervous System*; Vice-President, the American Psychiatric Association; Formerly Director, Colorado State Hospital.

Dr. Harold Swanberg, Mississippi; Secretary-Treasurer, Mississippi Valley Medical Society; Secretary-Treasurer, American Medical Writers Association; Editor, *Mississippi Valley Medical Journal*.

Dr. L. W. Sontag, Yellow Springs, Ohio; Director Fels Research Institute, Antioch College.

Dr. W. Edward Davis, Chicago, Ill.; Joseph Bolivar DeLee Professor and Chairman of the Department of Obstetrics and Gynecology, University of Chicago School of Medicine; Chief of the Chicago Lying-in Hospital.

The 1960 Academy Meeting

Plans for the 1960 meeting of the Academy to be held in Philadelphia on October 13-15, 1960, are moving along nicely. We will have Dr. Morris Fishbein with us as banquet speaker. Dr. Maury Sanger, Program Chairman, is planning about 20 small discussion groups which will meet each day for 90 minutes under the leadership of some of our top-flight educators. Since these groups will be limited to ten to fifteen registrants each, it is advisable that you register early. A number of symposia will also be held on such topics as Emotional Problems in General Practice, Interview Technique, Drugs and Psychotherapy, Psychiatry in the General Hospital, and The Doctor-Patient Relationship.

Additional topics to be considered include: Psychiatric Education for Non-Psychiatrists, Emotional Problems in Allergy and Dermatology, Drugs and Research, Handling the Patient with Chronic Illness, The Doctor As a Therapeutic Agent, Sterility and Frigidity, Emotional Aspects of Cardio-Respiratory Diseases, Psychosomatic Aspects of Surgery and Surgical Specialties, Hypnosis, Group Therapy, Short-term Psychotherapy, and one session tentatively en-

titled: "Are Drug Therapy and Psychotherapy Compatible?" Based upon the enthusiastic response to last year's "King-Sized Round Table," a repeat performance is planned for 1960. The panel will consider "Treatment Techniques in Anxious and Depressed Patients."

Other speakers who have already accepted invitations to participate in the 1960 program include: Dr. Joseph Hughes, Chairman of the Department of Psychiatry at Women's Medical College of Pennsylvania; Dr. Keith Fischer, a psychosomatically oriented internist at Temple University Medical School; Dr. Edward L. Bortz, Chief of Medicine at Lankenau Hospital, Philadelphia, and former President of the American Medical Association; Dr. Herman C. B. Denber, Chief of Research, Manhattan State Hospital, New York City; Dr. Milton Kurian, Chief of In-Patient Psychiatry, Maimonides Hospital of Brooklyn; Dr. Matthew Brody, Associate Neuropsychiatrist, Brooklyn Jewish Hospital, Consultant, Brooklyn State Hospital, and Chairman of the Subcommittee on Mental Health, Kings County, Brooklyn, N. Y.; Dr. Herbert S. Kuperman, Associate Professor of Therapeutics, New York University Post-Graduate Medical School; Dr. Robert S. Garber, Director of the Carrier Clinic, Belle Mead, N. J.; Dr. Maurice E. Linden, Commissioner of Mental Health for the City of Philadelphia; Dr. William F. Sheeley, Project Director for G. P. Education of the American Psychiatric Association; Dr. Burton Zohman, Professor of Medicine, State University of New York, Downstate Medical Center; Dr. Nathaniel Reich, Consultant Cardiologist at many Brooklyn and Long Island hospitals; Dr. Louis Joel Feit, New York plastic surgeon; Dr. James L. McCartney, psychiatrist and medical writer from Garden City, Long Island; Dr. William S. Kroger of Beverly Hills, Cal.; Dr. Bernard B. Raginsky of Montreal, and Dr. Ethan Allan Brown of Boston (the last three are all past-presidents of the Academy); Dr. George Sutherland of Baltimore, Associate Professor of Psychiatry, U. of Maryland, and President-Elect of the Academy, and Dr. Victor Szyrinski of Ottawa, Professor of Psychotherapy at the U. of Ottawa, who was the recipient of the award for the best manuscript at the 1959 meeting. Sessions will not start before 9 A.M., and this is a promise. Watch these columns in subsequent issues for more on the 1960 meeting.

Announcements of Meetings, Lectures, and Post-graduate Training

The Western Interstate Commission for Higher Education has received a three year grant from N.I.M.H. to conduct a regional program of post-

graduate education to augment local physicians' knowledge in diagnosis, treatment and rehabilitation of mental patients. Planning and supervision is being handled by the faculty of Langley Porter N.P. Institute.

Dr. Matthew Brody, Chairman of the Subcommittee on Mental Health of the Kings County Medical Society (Brooklyn, N. Y.), who is incidentally a Fellow of the Academy, has announced that the subcommittee has received a substantial grant from N.I.M.H. to foster psychiatric indoctrination of non-psychiatric physicians. Your editor notes with pride that Brooklyn has been a pioneer in the setting up of this type of post-graduate education in which small groups of doctors meet regularly at the office of a psychiatrist to ventilate some of the problems they face in the daily practice of medicine. Dr. Brody has also set up a telephone service where doctors can obtain telephone consultations on their psychiatric problems.

The Forest Hill Hospital at Des Plaines, Ill., has announced the Second Annual Scientific Program on Recent Advances in Psychiatry. These will be given at the hospital on Wednesdays from 8-10 P.M. on March 23, April 27, May 25 and June 22. Physicians and psychologists are invited to attend.

A course of six lectures on "Medical and Psychiatric Problems in Drug Addiction" will be given by Marie Nyswander, M.D., every other Wednesday at 8:30 P.M. at Eastview Hospital, 430 E. 80th St., New York, N. Y. Another course of six lectures on "Medical and Psychiatric Aspects of Alcoholism" will be given every other Wednesday evening at Eastview Hospital. These courses are open to members of the medical profession. There is no charge for the courses, but each one is limited to 25 participants. Application forms may be obtained by writing to Sidney S. Greenberg, M.D., Medical Director, Eastview Hospital.

Temple University in Philadelphia offers a P.G. course of weekly sessions for non-psychiatrists. It is conducted by O. Spurgeon English, H. Keith Fisher, and others. Address inquiries to the Dept. of Psychiatry, Temple University, Broad and Ontario Sts., Phila 40, Pa.

The Children's Hospital and the Child Guidance Clinic at 1700 Bainbridge St., Phila. 46, Pa., offers a seminar series on children's problems seen in general practice. A.A.G.P. credit is allowed. Write Donald C. Ross, at the Clinic.

The Academy of Psychodrama and Group Psychotherapy is scheduling post-graduate courses in July and August 1960, under the direction of J. L. Moreno. Write P.O. Box 311, Beacon, N. Y.

Dr. W. J. Stauble, 1025 Pine Ave. W., Montreal, is organizing a course for G.P.'s based on the method used by Michael Balint in London and would like to hear from anyone interested in this approach.

A post-graduate course in psychiatry for practicing physicians is being offered at the University of Michigan. Write to John M. Sheldon, M.D., Director, Dept. of Postgraduate Medicine, at 1610 Univ. Hosp., Ann Arbor, Mich.

A course in Gynecologic Endocrinology will be given at the N.Y.U. Post-grad. Med. School from April 18-22, 1960, under the direction of Dr. Herbert S. Kupperman, a Fellow of the Academy. Write to the Office of the Assistant Dean, N.Y.U. Post-grad. Med. School at 550 First Avenue, New York 16, N. Y.

The American Psychosomatic Society meets March 26-27 in Montreal . . . American Assoc. on Mental Deficiency meets May 2-6 in Baltimore, Md. . . . American Psychiatric Association on May 9-13 in Atlantic City.

Academy News Notes

DR. JANE FARLEY of the Farmlly Hearing Institute, Chicago, reported on the "Psychic Factors in Hearing Loss" at the October meeting of the Acoustical Society of America in Cleveland. She was recently awarded a three year extension of the National Institute of Mental Health support for research in this area.

DR. NATHAN W. COLEMAN of Mattapan, Mass., has accepted a full time Residency in psychiatry at the Boston State Hospital under a three-year grant by the N.I.M.H.

DR. SAMUEL WALDMAN of Brooklyn, N. Y., recently published "Essential Hypertension: Present Therapy" in the *American Practitioner and Digest of Treatment* for July 1959; "The Problem of Levarterenol Extravasation," in the *American Journal of Medical Sciences* for Dec. 1958; and "Circulatory Overloading During and Following Transfusion" in the *American Journal of Cardiology*.

DR. DONALD C. COLLINS of Los Angeles is President of the Hollywood Academy of Medicine for 1959; he is also a Fellow of the Ameri-

can College of Nutrition and Director of the American Academy of Applied Nutrition.

DR. WILLIAM A. CUNNINGHAM of Birmingham, Alabama, is President of the Birmingham Society of Clinical Hypnosis; he recently addressed the Ninth Post-graduate Obstetrics-Pediatrics Seminar at Daytona Beach, Florida, on "Hypnosis in Obstetrics"; he also participated in the instruction of senior students at the Medical College of Alabama in Medical Hypnosis.

DR. JAMES L. MCCARTNEY of Garden City, N. Y., presented papers entitled, "A Half Century of Personal Experience with Hypnosis" before the Society for Clinical and Experimental Hypnosis, and "Forty Years of Clinical Hypnosis" before the American Society of Clinical Hypnosis.

DR. WILLIAM S. KROGER of Beverly Hills, California, immediate past-president of the Academy, addressed the gynecology and urology departments of the University of California at Los Angeles. He also spoke before the Los Angeles Gynecology Forum, the Los Angeles Community Health Society, the Baltimore Society of Clinical Hypnosis and the New York Polyclinic Hospital on Hypnosis in Clinical Medicine.

DR. MILTON JABUSH of Lakewood, N. J., President of the New Jersey Section of the Society for Clinical and Experimental Hypnosis, has been appointed to the Board of Managers of the Marlboro State Hospital of New Jersey.

DR. GEORGE J. TRAIN of Brooklyn, N. Y., recently published a paper on "Violent Acts Associated with EEG Changes" in the *Journal of Clinical and Experimental Psychopathology*.

DR. DAVID B. CHEEK of San Francisco and Leslie M. LeCron of Los Angeles participated in symposia on hypnosis during Nov. and Dec. in San Juan, Porto Rico and Ocho Rios, Jamaica.

DR. SIDNEY DROBNES was elected President of the Medical Staff of W. W. Backus Hospital, Norwich, Conn., for 1960.

DR. THEODORE E. MANDY of Baltimore was chairman of the membership committee, American Society of Clinical Hypnosis, for 1959; he is chairman of the program committee for 1960. He is also chairman of the committee on arrangements for the annual scientific meeting of the Society for Clinical and Experimental Hypnosis; he presented a paper on "Psychosomatic Aspects of Infertility" before the International Fertility Association; a paper on "Orientation and Indoctrination of the Hypnotic Sub-

ject" at the American Society of Clinical Hypnosis. He was also Director of a 10 week course in Hypnosis in Dentistry at the University of Maryland Dental School.

DR. EDWARD PODOLSKY, Brooklyn, N. Y., co-authored the "Handbook of Abnormal Psychology"; he also published "Somnambulist Homicide" in *Diseases of the Nervous System* and the "Psychodynamics of Criminal Behavior" in the *Journal of Forensic Medicine*.

DR. LIONEL BLACKMAN of New Hyde Park, N. Y., spoke on "Psychosomatics in Dentistry" to the County Dental Association at the Nassau County Academy of Medicine.

DR. LEON A. FRIEDMAN of New York has been appointed Visiting Neuropsychiatrist at Morrisania City Hospital. He is also Chief of the Department of Electroencephalography at the hospital.

DR. ANTHONY R. TORTORA of Brooklyn has published "An Effective Approach for Golf Professionals" in the *Professional Golfer Magazine* for March 1959; also "Fear, Anxiety and Cardiac Nosophobia in Cardiac Neurosis" in the *Nebraska State Medical Journal* for June 1959.

DR. S. GEORGE BROWN of Concord, N. H., is State Chairman for Mental Health for the American Academy of General Practice; he has also been appointed to the Mental Health and Alcohol Committee of the New Hampshire Medical Society.

DR. HENRY TURKEL of Detroit, Michigan, presented a paper on "Medical Treatment of Mongolism" at the A.A.A.S. Convention in Chicago.

DR. ALVIN F. GOLDFARB of Philadelphia presented an exhibit on the "Pathogenesis and Multiphasic Management of Premenstrual Tension" at the Penn. State Medical Society Meeting. This exhibit will also appear at the American Academy of General Practice Annual Meeting in March 1960.

DR. HENRY GUZE of Newark, N. J., spoke on the topic, "What Is Sexually Normal" at the second annual meeting of the Society for the Scientific Study of Sex in New York City.

DR. BERTRAM B. MOSS, in addition to his post as Secretary of the Academy, is also Secretary of the Illinois Academy of Criminology, Director of the Illinois Academy of General Practice, Chairman of the I.A.G.P. Committee on Mental Health, and Consultant to the U.S. Parole and Probation Service, Northern District of Illinois.

DR. WILFRED DORFMAN, President of the Academy and Editor of *Psychosomatics*, has retired from his post as Senior Psychiatrist, Brooklyn State Hospital. He has been appointed Assistant Attending Psychiatrist, in addition to his former appointment as Assistant Attending Physician in the Department of Medicine at Maimonides Hospital of Brooklyn. His article on "The New Approach to Depression" appeared in *World-Wide Abstracts* for November 1959.

Chairmen and members of each Academy of Psychosomatic Medicine committee for 1960 include:

Annual Awards Committee: Dr. Robert N. Rutherford, Seattle, Wash. (Chairman), Dr. M. Murray Peshkin, New York, N. Y., Dr. Victor Szyrsky, Ottawa, Canada.

Auditing Committee: Dr. Murray Peshkin, New York, N. Y. (Chairman), Dr. George Sutherland, Baltimore, Md., Dr. Robert N. Rutherford, Seattle, Wash.

Convention Arrangements Committee: Dr. Bertram B. Moss, Chicago, Ill. (Chairman), Dr. Lawrence B. Weiss, Philadelphia, Pa., Dr. Jerome Miller, Philadelphia, Pa.

Credentials Committee: Dr. Maury D. Sanger, Brooklyn, N. Y. (Chairman), Dr. Arthur N. Foxe, New York, N. Y., Dr. Burton L. Zohman, Brooklyn, N. Y.

Liaison with the American Dental Association: Dr. Melvin Land, Dallas, Texas (Chairman).

Liaison with the National Institute of Mental Health: Dr. Charles Baron, Covington, Ky. (Chairman).

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Recent Meetings and Reports of Interest

A report by Dr. Alvin Feinstein and his associates of Irvington House, N. Y., at the recent meeting of the American Heart Association in Philadelphia, pointed out that the restriction of scholastic, athletic, vocational, and other physical activities often imposed on the asymptomatic post-rheumatic fever patient serves no useful purpose. These restrictions have undesirable psychosocial effects.

Vanillic Diethylamide, a new drug that stimulates respiration, is effective in barbiturate poisoning. Dr. Melvin L. Bernstine of Albert Einstein Medical Center, Philadelphia, reported that in six of eight patients in deep coma, complete recovery took place in 12 hours; the remaining two patients required 48-72 hours of recovery.

Radioactive sugar has been used to trace carbohydrate metabolism in normal and schizo-

phrenic subjects. Dr. Jacques Gottlieb, Director of the Lafayette Clinic in Detroit, reported that the blood of schizophrenic patients contained some extracellular substance that blocked their ability to mobilize energy to act in stress situations.

Five U. S. psychiatrists, recently returned from a visit to Russia, reported that there are "far fewer" hospital beds devoted to mental patients in the U.S.S.R. than in the U.S. The fact that a smaller number of beds are devoted to psychiatric patients has been related to the tendency to treat these patients at home or in a community clinic rather than in a large hospital. One of the psychiatrists, Dr. Max Fink, Director of Research at Hillside Hospital in New York stated that it is all a matter of semantics in that there was no way of comparing the number of mentally ill in Russia and the U.S. He cited the fact that in the U.S. we have 1,000 analysts, who are very busy, but that a president of a large corporation, a brilliant man earning \$150,000 a year who sees his analyst could not be considered mentally ill.

Adrenal overactivity plays a crucial role in the ability of epinephrine to trigger sharp blood lipid increases under the influence of psychic stress. Recent reports have indicated that psychic stress increases blood lipids, especially the unesterified fatty acids. Dr. Shafir and Dr. Steinberg of N.I.M.H. saw no increase when epinephrine was injected into hypophysectomized dogs until ACTH was given concomitantly to stimulate the output of Cortisone. Similarly, in adrenalectomized dogs, epinephrine alone had no effect until given with cortisone.

The first issue of a monthly 16-page newspaper called *Factor* appeared recently. It is dedicated to the psychiatric factor in medical practice and informs physicians of current developments in psychiatry as they relate to the practice of daily medicine. It is published by the Professional News Bureau, 65 E. 55th St., New York 22, N. Y. The first issue, among other items, included a splendid report of the October meeting of the Academy. If you're not on their mailing list, we suggest that you write to them. There is no charge for this newspaper.

A community approach to the promotion of mental health is evolving, but the trend must be nurtured by psychiatrists and other physicians working together at the local level. This was the key thought that wove through discussions

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at the recent Conference of Mental Health Representatives of State Medical Associations, sponsored by the A.M.A.'s Council on Mental Health. Among their recommendations: All new construction should be to provide community mental health centers and general hospital facilities—not large mental hospitals; state medical societies should be encouraged to study ways to close the gap between organized medicine and the public mental hospital; private psychiatric hospitals should encourage staff relationships similar to those in general hospitals; the psychiatric unit of the general hospitals should function in terms of community needs; it must be able to provide effective treatment for psychiatric emergencies; out-patient clinics in psychiatric hospitals should have a better relationship with other doctors, especially the referring physician; the

community must share in the responsibility of accepting the well patient back into its social life; state laws should permit voluntary admittance to state institutions to spare the patient the stigma of a court hearing.

Group Health Insurance will cover costs of psychiatric services for 1500 patients in the New York City area. This service will be available at no extra cost to about 30,000 G.H.I. subscribers and their families (about 77,000 individuals). Under the plan those needing psychiatric services may receive up to 15 sessions of individual psychotherapy (GHI pays \$15, while the patient pays \$5), or Group psychotherapy up to a maximum, in combination with individual psychotherapy, of \$225 (GHI pays \$3 per session, and the patient pays \$1). The plan also pays for psychological testing to a maximum of \$45.



National Society for Crippled Children and Adults, 2023 W. Ogden Ave., Chicago 12, Ill.

Abstracted from the Medical Press

MIGRAINE AND ECLAMPSIA. William K. Rotton, M.D., Marlene R. Schatlben, B.S., and Emanuel A. Friedman, M.D., *Obstetrics & Gynecology*, 14:322, Sept. 1959.

The authors review the etiological theories, physiopathology, psychopathology and symptomatology of migraine and acute toxemia and are impressed with the similarities of the two conditions. Case reports of 221 patients who had been diagnosed as having had migraine and who had also carried one or more pregnancies to the third trimester were reviewed. Of these 21.4% were found to have had toxemia. Since the expected incidence of toxemia is about 7%, the occurrence of preeclampsia and eclampsia in this series by chance is extremely unlikely. The authors state that 58.1% of the patients experienced remission of migraine during pregnancy; in the remainder it was unchanged or significantly worse. They suggest that in the latter group toxemia is more apt to occur and that these individuals may be "eclampsia prone." Since the treatment of eclampsia is unsatisfactory, it behooves the attending physician to be aware of this apparent relationship and to be especially vigilant in the prenatal care of such women.

Frederick W. Goodrich, Jr., M.D.
New London, Conn.

ASSOCIATION OF A SPECIFIC OVERT BEHAVIOR PATTERN IN WOMEN WITH INCREASING BLOOD CHOLESTEROL AND CLOTTING TIME, ARCUS SENILIS AND INCIDENCE OF CLINICAL CORONARY DISEASE. R. H. Rosenman and M. Friedman, *Abstracts of the 32nd Scientific Session, Amer. Heart Association*, October 1959.

The possible role of socio-economic pressures in the pathogenesis of clinical coronary disease was studied in three volunteer groups of women aged 30 to 60 years, chosen by lay selectors solely on the basis of different overt behavior patterns. Group A (69 women) exhibited a behavior pattern characterized by sustained, competitive drive, ambition and constant immersion in occupational "deadlines." Group B (103 women) conversely, exhibited complete absence of drive and freedom from occupational "deadlines." Group C (85 women) also exhibited no drive but were variously subject to moderate occupational "deadlines."

In each instance, blood cholesterol, lipoproteins, clotting time, habitus and maternal, menstrual and family history data were obtained; dietary, smoking, drinking and exercise habits were precisely assayed and presence of arcus senilis and clinical coronary disease were determined.

Women in Group A exhibited markedly higher average blood cholesterol (294/100 ml.) and incidence of arcus senilis (35%) and clinical coronary disease (36%) than women in Group B (216/100 ml., 8 and 7% respectively) or Group C (255 mg./100 ml., 25 and 7% respectively), clotting times were fastest in Group A women.

These striking differences were not ascribable to differences in caloric or fat intake, age, habitus or "femininity." Thus, a specific behavior pattern in women was associated with elevated blood cholesterol, faster clotting time and higher incidence of arcus senilis. The findings also suggested that this behavior pattern plays an important causal role in inducing clinical coronary disease in women, as was previously found in men.

Burton Zohman, M.D.
Brooklyn, N. Y.

DORIDEN: A QUIETING AGENT FOR ANXIETY IN ORAL SURGERY. W. B. Linenberg, J. H. Dirlam, and H. J. Harpole, *Oral Sur., Oral Med., Oral Path.*, 13:59-62, January 1960.

Glutethimide (Doriden-Ciba), a nonbarbiturate, quick-acting, short duration sedative compound, was the drug used for this clinical study.

The authors studied 79 patients, male and female, with acute apprehension and nervousness, from a hospital out-patient oral surgery service. Their ages ranged from 15 to 79 years, with approximately one half of the group included in the 20 to 40 age range. The operations included extractions, removal of impacted teeth and alveolectomies. Blood pressure and pulse values were obtained prior to the administration of 0.5 gm. Glutethimide. At the end of 30 minutes these were repeated and degree of sedation noted. The degree of sedation was classified as good, fair or poor. A placebo was used with thirteen patients.

Of the 70 patients receiving Glutethimide, the sedative effect was "good" for oral surgical procedures in 62 cases (88%). In seven patients (10%), although the operation was performed, sedation was only "fair." In one case (2%), sedative was "poor," and the surgical procedure was carried out with great difficulty. In only one instance was the use of placebo effective in

calming and relaxing the patient. The average systolic and diastolic decreases in blood pressure were 14 mm. Hg and 7.3 mm. Hg, respectively. The average decrease in pulse rate was 10 beats. The authors encountered no allergic reaction.

It was concluded that Glutethimide (Doriden) affords an effective and safe premedication for nervous and apprehensive patients about to undergo oral surgical procedures. As a premedicant, it demonstrates markedly good sedation and high safety and reduces the fears, anxieties, and apprehensive tendencies of most dental patients.

Melvin Land, D.D.S.
Dallas, Texas

PHOBIAS IN CHILDREN. Hanna N. Colm, *Psychoanalysis and the Psycho. Rev.*, 46:65-84, 1959.

Children's fears are often seen in somatic symptoms as well as in disturbed behavior. Colm discusses phobias as invariably caused by a "very specifically unhealthy relationship" with the parents or other significant persons. The child is afraid because he feels he has no one to trust. The behavior of parents of phobic children usually falls into one of two types, either too lenient or over-controlling. Clinical examples are presented to demonstrate how the child is cured of his phobia in learning to trust the therapist in the role of surrogate parent.

Elizabeth Thoma
Rockville Centre, N. Y.

CLINICAL EXPERIENCE WITH PHEN-ELZINE IN PSYCHOSOMATIC AND PSYCHOPHYSIOLOGIC DISORDERS, A PRELIMINARY REPORT. Walter L. Evans, M.D., *N. Y. State J. of Med.*, in press.

Twenty-five patients were treated with phenyl-ethyl hydrazine for a variety of psychosomatic and psychophysiologic conditions. The diagnoses included angina pectoris, hypertension, rheumatoid arthritis, irritable colon, fibrosis and bursitis. Of these patients 72% were either completely relieved or markedly improved, having been refractory to a number of previous medications.

It is felt that this type of disorder may occur in a psychodynamic setting quite similar to the depressions. It is generally conceded that in the depressions outwardly directed aggressive energy is deflected back upon the self by anxiety arising from an unrealistic super ego. Since the hydrazine amine oxidase inhibitors have been

effective in depression by catalyzing the outflow of psychic energy, it would be expected they would also be helpful in psychosomatic and psychophysiologic conditions. The above results appear to bear this out.

Walter L. Evans, M.D.
New York City

PERSONALITY FACTORS AND CERTAIN ATTITUDES TOWARD CHILD REARING AMONG PARENTS OF ASTHMATIC CHILDREN. George T. Fizzle, Ph.D., *Psychosomatic Med.*, 21:208-217, May-June 1959.

Parents of 100 asthmatic children were compared with a like number of parents of children suffering from other diverse ailments. They were studied and compared by means of the M.M.P.I., U.S.C. Parent Attitude Survey and personal interviews. No significant differences were found. The scores of parents of children with the most severe symptoms were compared with parents of children with the mildest symptoms. Both the asthmatic and control group M.M.P.I. scores rose consistently above the mean of the general population.

The author states that it may reasonably be asked if the emphasis upon psycho-metric techniques has not produced a somewhat superficial approach to the problem, even when the many advantages of such methodology are considered. At the very least, however, the study has demonstrated that the thesis that parents of asthmatic children may be set apart from the parents of other sick children is not one which can be readily substantiated.

Maury D. Sanger, M.D.
Brooklyn, N. Y.

A MEDICAL VIEWPOINT FOR PREVENTION OF CRIME. Bertram B. Moss, M.D., *G.P.*, 19:92-96, February 1959.

Family doctors should realize their potential crime prevention powers when they are dealing with the emotional problems of their patients. Often the patient's expression of illness is precipitated by realistic family problems at home. These are often the problems of the delinquent youth or the criminality of a member of the family. The patient seeking assistance, even though it be indirectly by means of displaced symptoms, is the member of the family who realizes that help is needed. Ventilation of the family turmoil and some mature suggestions by the physician, is often the first step towards helping the person at home who needs the actual help

to learn to seek it. Underlying much of the misbehavior of some delinquents and/or criminals is frequently an emotional deprivation. This can be a matter of family or sibling relationships or some inter or intrafamily conflict. The physician must become aware that the adult suffering from the effects of a troublesome relative may eventually either seek the direct counsel of the physician or else may come in directly with psychosomatic complaints. In either event, the physician then has the opportunity to help two people.

Comparable to the situation with the problem of cancer, there is as yet no known remedy and the best hope lies in educating people to seek assistance at the first symptom of deviant social behavior. Revolt against authority or the inability to live in conformity with established mores are often the earliest symptoms of delinquency. These are often first expressed in the home in the pre-school era. The grade school is also a common place for early rebellion to express itself; another indication of inability to conform is a "police station-complaint" that is registered against the teenager.

The family doctor may find himself working with patients or relatives who are consciously or otherwise encouraging criminality either by neglecting or sanctioning misbehavior that expresses inhibited, frustrated, suppressed or repressed thought of their own. Other parents or parent-surrogates refuse to recognize the existence of family misbehaviors. The family doctor must make it apparent that he wants to help the delinquent, if only by explaining his actions. He must make it apparent that he wants neither to punish nor to moralize. If necessary, he must be prepared to recommend psychiatric or psychologic assistance. To accomplish this he must be able to recognize the existence of psychopathology and to know when it is possible to help the person concerned directly and when it is necessary to seek the help of the professional therapist. The treatment of patients in need of "minor psychotherapy" by the family physician presents many advantages. First, many more patients will thus receive some effective treatment; second, many people are less reluctant about revealing their emotional conflicts in front of their family physician; third, not everyone can tolerate being told that he is in need of the care of a psychiatrist. Apart from psychotherapeutic procedures, recent pharmacologic advances for treating the acutely anxious, the highly agitated, the depressed, the alcoholic and the addict should encourage the family physician to want to help these people himself.

Bertram B. Moss, M.D.
Chicago, Ill.

THE PSYCHOLOGIC IMPORTANCE OF THE UTERUS AND ITS FUNCTIONS.

M. G. Drellich and I. Bieber. *J. Nerv. & Ment. Dis.*, 126:322-336, 1958.

Twenty-three premenopausal patients who underwent hysterectomies at the New York Memorial Center were observed in order to study their attitudes and emotional reactions both before and after surgery.

Most women regarded the uterus as either a (a) childbearing organ, (b) excretory organ, (c) regulator and controller of body processes, (d) sexual organ, (e) reservoir of strength and vitality, (f) maintainer of youth and attractiveness.

Theoretical implications: (a) the uterus is regarded by many women as an important symbol of femininity, and (b) "castration" is regarded as a threat of injury to the uterus (the organ of sexuality).

Leo Wollman, M.D.
Brooklyn, N. Y.

THE PHYSIOLOGY OF THE VAGINA DURING ORGASM. W. H. Masters, *Western J.*, 68:57-72, Jan.-Feb. 1960.

Nearly six years ago, the Sex Research Project was established within the framework of the Department of Obstetrics and Gynecology of the Washington University School of Medicine. It is with considerable professional pride that the *Western Journal* presents the following paper by Dr. W. H. Masters, the first of a series of studies on the anatomical behavior of the human female vagina during its sexual response. The "Kinsey-Group" have brought to relatively complete fruition the technique for acquiring information regarding the human male and female sex responses. The Sex Research Project was developed to explore the basic physiology, of which no precise and substantial knowledge has been collected scientifically to date.

This group's approach follows the dictum of Dr. Carl Hartmann—that it is not the province of research to explain everything. It is, rather, the duty of any duly constituted research effort to collect the facts. Once sufficient basic knowledge is available, the paths of resolution for major problems usually become relatively obvious. With this first presentation, which we regard editorially and scientifically as fulfilling these criteria, Dr. Masters reports the first basic anatomical study. Other similar studies will step-by-step develop the constellation of physiological interrelationships in this relatively unknown area. We feel this is most significant basic material being collected in a completely acceptable and scientific fashion.

Since many of the psychosomatic problems encountered in the practicing physician's office have to do with the individual's sexual patterns and responses, this represents the first step in the medical exploration of useful, clinical material. This is an excellent paper.

Robert N. Rutherford, M.D.
Seattle, Washington.

A PSYCHIATRIC STUDY OF IDIOPATHIC PROLONGED LABOR. Andrew S. Watson, M.D., *Obstetrics and Gynecology*, 13:598-602, May 1959.

The author, a psychiatrist, reports on 25 patients with prolonged labor (defined here as more than 23 hours), not due to anatomic factors. Twenty patients were primigravidae. Postpartum interviews showed marked similarities in attitudes toward parents, sex and marriage, conception and childbirth. Most of the patients came from rigid, highly moralistic families and were oriented toward the father rather than the mother. "Nearly all patients suffered from severe sexual inhibitions and frigidity." Dr. Watson presents a theoretical formulation of the psychologic mechanism of prolonged labor and offers suggestions for its management. It is significant that the obstetrical staff became aware of the characteristics of those patients prone to have this type of complication and, as the study progressed were able to predict its development in the second trimester. He suggests that the obstetrician be on the look-out for patients who deny any anxiety about labor. These women are especially in need of an opportunity to verbalize their deep-seated fears.

Frederick W. Goodrich, Jr., M.D.
New London, Conn.

EMOTIONAL PROBLEMS OF ADULT CANCER PATIENTS. B. Cobb, J. of *Amer. Geriatrics Soc.*, 7:274, March 1959.

In any severe illness, the need for a humanistic physician who assesses the actual life situation and special psychologic make-up of his patient, is great. When the disease is cancer and the patient an adult shorn of his independent and protective role in the family, this need is intensified. A good patient-physician relationship beginning with the initial diagnostic examination is the patient's best guarantee against the development of crippling beliefs and their expression in unnecessary restriction of activities.

The author's study concerns the emotional problems revealed by 40 patients as they faced the diagnosis of cancer, the radical treatment

involved and the reality of either returning to active life or meeting imminent death. These problems resolved themselves into three major categories of emotional stresses experienced either singly or simultaneously: 1) anxieties associated with the meaning of cancer to the individual, 2) conflicts arising from the precipitation of a productive adult into an unaccustomed and barren hospital world and 3) emotional components of separation from the family either temporarily by hospitalization or permanently by death.

This investigation of emotional stresses experienced by adult cancer patients emphasizes the importance of the psychologic role of the doctor. A warm, protective relationship between doctor and patient minimizes many of the emotional problems and therapeutic management is expedited when the doctor is aware of possible sources of anxiety impinging upon his patient.

Burton Zohman, M.D.
Brooklyn, N. Y.

PROBLEMS OF ACCIDENT-PRONE PATIENTS. Bertram B. Moss, M.D., and Irwin T. Barnett, M.D., *G.P.*, 21: No. 7, July 1958.

Insurance companies as well as physicians realize that physical trauma from an accident may produce or result in emotional trauma which can eventually be as disabling as the original physical injury. Many physicians exhibit a definite resistance in treating patients who are repeatedly involved in medico-legal suits. One of the factors producing this resistance is the misunderstanding or lack of knowledge concerning either the dynamics of the emotional components of the patient or the true attitude of the insurance carrier. Some of the resistance is due to the emotional conflicts within the physician himself. Then again there are those physicians who actually believe the propaganda that all doctors who defend a patient's right for physical or emotional damages are "ambulance chasers."

There are some doctors who do not like to treat patients who may eventually need to have their physical or emotional ailments defended in a court setting because of the threatening role that such patients may play in the emotional life of these doctors. The physician who has a strong desire to be loved and a strong fear of not being loved is at the mercy of such patients who sense these attitudes on the part of the doctor and make unreasonable demands of him. These patients know that their doctor is afraid to assert himself and modify his behavior and call his "shots as he sees them." Such an unrealistic attitude on the physician's part comes from his

own anxieties rather than from the patient's desires. These doctors react to the accident-prone patient by becoming passive and yielding to the patient or totally reject all personal injury suits—much to the enjoyment of the insurance carrier.

In reality, patients unconsciously want their physicians to be firm and act as father-figures, and feel rejected if their doctor doesn't act accordingly. When so disappointed, these patients stop demanding attention and make every effort to discredit the physician who rejected them by never getting relief of symptoms. The doctor gets more resistant and feels that the emotional reaction of the patient who doesn't respond to his treatment is illogical and not normal.

Neither the doctor nor the patient understand the dynamics of each other and each seems very peculiar to the other. The doctor becomes even more frustrated when he finds that the results of the time he spends with the patient giving him moralistic pep-talks only results in equally bad results.

The crux of understanding accident-prone patients is that they seem to have an acute sense of shame and guilt, so that rather than insult their own egos they find it far less disturbing to have an accident to blame. Many of these problems could be avoided if the physicians who give first-aid to injured patients would spend a few minutes reassuring them, relieving their anxiety and lessening their guilt feelings. All physicians should consider the existence of hysterical manifestations and also recognize that the absence of organic features need not necessitate the connotation of malingering. Those patients who have definite "compensation" neurosis should be offered a face-saving means of relinquishing their symptoms gracefully and with dignity after being exposed to the reality of their symptoms in relation to existent pathology.

Bertram B. Moss, M.D.

Chicago, Ill.

PERSONALITY CHARACTERISTICS OF PATIENTS TREATED IN VETERANS ADMINISTRATION HOSPITAL FOR FRACTURES OF MAXILLA AND MANDIBLE. Heyl G. Tebo, *Oral Surg., Oral Med., Oral Path.*, 11:681-687, July 1958.

The oral surgeon who treats many fractures often finds that his work is complicated as much by the personality of the patient as by any other factor. Tebo reviewed 247 case histories of patients treated for jaw fractures over seven years.

Most were aged 21-30; distribution was 79% white and 21% negro patients. By occupation, 155 were classified as skilled laborers; 44 common laborers formed the second largest group.

In 17%, the patients were discharged as "absent without leave" from the hospital. This contrasts with a 2% rate for this type of discharge among all hospitalized patients. At the time of injury, 33% of the patients were under the influence of alcohol. Definite diagnosis of psychiatric disease had been made at some time in 16% of these.

From the standpoint of the oral surgeon, the patients may be grouped into three large divisions. In the first, comprising 40% of the patients treated, were those who showed aggressive, belligerent, impatient, emotionally unstable, immature personality characteristics. These generally received their fractures during fights and gave considerable trouble in the hospital. Patients in the second group (29%) were typically intoxicated at the time of receiving trauma and were difficult to handle for the first few hours or days in the hospital. Subsequently, they gave little or no trouble. Patients in the third group (31%) apparently were innocent victims of assault or accident; these cooperated well with treatment.

The typically uncooperative or poorly cooperative patients had certain characteristics noted repeatedly in their history. They often gave history of having many jobs of short duration, and records of broken homes and multiple divorces were frequently obtained in the social history. Treatment was often complicated by their delay in seeking care after injury.

Melvin Land, D.D.S.

Dallas, Texas

THE NATURE OF HYPNOSIS: ARTIFACT AND ESSENCE. Martin T. Orne, *J. Abnormal and Soc. Psych.*, 58:277-299, 1959.

The most meaningful current theories of hypnosis interpret hypnotic phenomena along three major lines: (a) desire on the part of the subject to behave as in a trance state, (b) increase in suggestibility, and (c) an aspect variously called "an altered state of consciousness," "cortical inhibition," "dissociation," etc. Regarding (a) and (b) as artifacts, it is the purpose of the author to separate them from (c), the "essence" of hypnosis. Three skillfully designed and carefully controlled experiments led him to two conclusions: much hypnotic behavior is determined by the subject's wish to play a role, and increased motivation is not unique to hypnosis but operates

with equal force in other experimental and life situations. As for (c), Orne further concludes that, in the absence of objective indices of hypnosis, the existence of trance may be considered a clinical diagnosis, the real focus appearing to lie in the subjective experience of the patient.

Elizabeth Thoma
Rockville Centre, N. Y.

TRANQUILIZERS FOR GYNECOLOGIC OUT-PATIENTS. J. G. Maclure, M.D., J. R. Schanze, M.D., and J. H. Ferguson, MD., *Obstetrics & Gynecology*, 13:760, June 1959; and

CLINICAL EVALUATION OF A TRANQUILIZING DRUG. Arthur G. King, M.D., *Obstetrics & Gynecology*, 13:763, June 1953.

Both of these papers reported on the use of tranquilizing drugs in gynecological out-patients with the "usual complaints" unrelated to demonstrable pathology. The first study was done on 143 patients in a University out-patient clinic, and the double blind technique was used to compare meprobamate, Ultram, and a placebo. The second involved 98 private patients, and compared Nostyn in varying doses with a placebo. There were no significant differences in either study between the effectiveness of the placebos and the tranquilizers used. The "failure" rate in both groups was remarkably similar. The authors of both papers feel that placebos are as effective as the drugs in those patients who respond, and that rapport, reassurance, and empathy are the common denominators in any success.

Frederick W. Goodrich, Jr., M.D.
New London, Conn.

CARE AND TREATMENT OF THE SENILE AND ARTERIO-SCLEROTIC MENTAL PATIENT. N. Beckenstein, *Dis. Nerv. Syst.*, 20:102, May 1959.

Psychoses of the senium accounted for greater percentages of first admissions to New York State Mental Hospitals and to the Brooklyn State Hospital in the year 1957 than they did in 1943. When the results of studies made in 1943 and in 1957 on 100 consecutive patients with senile psychoses and 100 with psychosis with cerebral arteriosclerosis were compared, the following facts were elicited: Patients admitted in 1957 were older. The reasons for admission were similar, the most frequent being inability to care for the patient any longer at home or in an institution

such as a general hospital, nursing home or home for the aged.

Patients were admitted to the Brooklyn State Hospital after a longer stay at home in 1957 than in 1943. This occurred probably because of better understanding of elderly persons and a greater degree of tolerance toward them, better health services, the widespread use of antibiotics and tranquilizers, social security benefits and the establishment of "golden age" clubs and day care centers for elderly persons.

The number of patients leaving the hospital in both studies, was the same. Fewer patients in the 1957 series died so that more remained in the hospital. The percentages of patients who died were approximately the same at one month but the percentage of patients who died in the six-month period after admission was greater in the 1957 series.

The patients remaining in the hospital are to be the subjects for a study to determine how many can be returned to their former homes or sent to another type of institution if guidance in their care can be provided. The objective is to devise means whereby aged persons with mental disorders can be cared for at home without being admitted to a state mental institution and to develop a way to help at home those who have improved and have been discharged from such an institution.

Burton Zohman, M.D.
Brooklyn, N. Y.

HOPE. Karl Menninger, M.D., *Am. J. of Psychiat.*, 116:481-491, Dec. 1959.

All doctors in practice more than a decade have seen the "hopeless case" recover.

Confirmation for the sustaining function of hope in life has come from the scientific laboratory. Curt Richter of Johns Hopkins has reported that when rats were placed in certain situations which seemed to permit of no chance for escape, even vigorous animals gave up their efforts and rapidly succumbed. After elimination of the "hopelessness," the rats did not die.

The occurrence of sudden deaths in animals and even in humans can often be best described in terms of hopelessness, where all avenues of escape are apparently closed. Walter Cannon has described "Voodoo Death."

Hope reflects the working of the life instinct in its constant battle against the various forces that add up to self-destruction.

Making a diagnosis when the patient confronts us is not enough. We must understand the man, how he has become what he is, what goes on inside of him, what goes on around him, and how these interact.

PRE-OPERATIVE PSYCHIATRIC CONSULTATION. E. M. Litin, M.D., J.A. M.A., 170L:1369-1372, July 18, 1959.

The author points out that pre-operative consultation can be helpful. In paranoid and hysterical patients it may result in psychotherapy rather than in treatment by surgical means. Elective operations on the genital area in paranoid males have often lead to tragedy. In hysterical females, surgical procedures naturally fail to remove the somatic expression of an emotional disturbance.

Most important is the history that a significant person in the patient's life had a similar illness. Significant events surrounding the onset or the recurrence of the symptom may be important in helping to make a psychiatric diagnosis. The symbolic significance of the symptom or the involved organ and the manner in which the patient discusses the matter should be considered.

STERILITY AND THE MAGIC POWER OF THE MATERNAL FIGURE. L. H. Blum, Ph.D., *J. Nerv. and Ment. Dis.*, 128:401-408, May 1959.

The most significant factors influencing psychogenic sterility are fear and the anxiety over the prospect of becoming a mother. The woman feels that she is still a little girl and is inadequate.

The paper deals with the occurrence of pregnancy after the decision to adopt a child. In such instances, this decision itself brings about diminution of the emotional factors which prevented conception.

In the case described, the course of psychotherapy revealed anxiety in relation to women in roles of authority and the ways in which magic thinking was used. The latter occurred despite the superior intelligence and professional training of the patient.

EPIDEMIC NEUROMYASTHENIA. D. A. Henderson, M.D., and A. Shelokov, M.D., *New Eng. J. of Med.*, 260:757-764 and 260:814-818, 1959.

This bizarre illness, occurring in epidemics, with the protean symptoms of fatigue, headache, alternations in emotional status, aching muscular pains, paresis and paresthesias, has its greatest susceptibility in doctors and nurses. Clinically similar illnesses have been termed "Iceland Disease," "Atypical Poliomyelitis," and "Benign Myalgic Encephalomyelitis," etc.

The relative paucity of physical findings and the lack of significant laboratory findings has

often led to the diagnosis of psychoneurosis or mass hysteria as the underlying problem.

Depression, tension and emotional instability have been impressive and among the most incapacitating and persistent symptoms. Dizziness is prominent as an initial symptom. Tinnitus, hyperacusis and transient hearing difficulties, probably related to eighth nerve involvement, are seen on occasion. Possible involvement of other cranial nerves is suggested by occasional transient facial paresis and the more regularly noted symptom of blurring of vision or diplopia.

Cases are concentrated usually in young and middle aged adults, with an increase in frequency and severity in females.

The symptoms indicate a multiorgan system involvement. Investigators agree that altered functions in either the central nervous system or peripheral nervous system, or both, must be present.

The etiology and pathophysiology remain a total mystery.

MANAGEMENT OF PSYCHOSES IN GENERAL PRACTICE. F. J. Hamilton, M.D., and J. F. Masterson, Jr., M.D. *Med. Clin. N. America*, May 1958.

The present trend toward closed psychiatric units in general hospitals makes it imperative that the practicing physician understand the basic principles applicable to the recognition, disposition and management of the psychoses seen in practice. These problems are covered adequately in this article.

Psychopathology is defined as the individual's reaction to stresses, physical or psychological, that are a threat to the integrity of the person.

Depressive reactions are probably the most common psychotic disorders seen. They are apt to be undiagnosed or misinterpreted by physicians and society. Fatigue, varying symptoms of anxiety, sleep disturbances (especially early morning awakening), loss of appetite for food and sex, a decrease in weight, and a lessened desire for social activities are prominent symptoms.

Schizophrenic symptoms vary. Often there are vague physical complaints, blunted emotions, or an incongruity of emotional affect with thought content.

Organic reaction types may be acute or chronic. Intellectual functions, such as attention, retention, memory and recall are affected. Disorientation and confusion are common.

In major illnesses, the danger of suicide and homicide is tangible. It is advisable to be cautious in recommending cruises, trips or other pleasurable vacations, since they frequently increase the mood disorder.

In the management of adolescents, the medical practitioner can serve as a reality sounding board that is free from the conflicting emotions of parents. Psychiatric referral should be obtained in all instances where the ability to function in the environment is severely impaired in patients with protracted psychoneurotic symptoms or a long standing character problem. Hospitalization should be considered as a last resort for the adolescent. The physician should consider any suicidal threat seriously and send the patient to a psychiatrist or hospital.

ANOREXIA NERVOSA. D. Stafford-Clark and J. H. Willis, *Brit. J. of Clin. Pract.*, 13:533-540. (Quoted in *World-Wide Abstracts*, Vol 2, No. 11, Dec. 1959.)

The etiology is obscure, but the disorder is most prevalent in adolescent and young females of nervous disposition. From the psychoanalytic viewpoint, anorexia nervosa has been ascribed to a rejection of female sexuality by immature females for whom food is associated with conscious fears of physical maturity and unconscious fantasies of oral insemination. Anorexia Nervosa can be distinguished from pituitary dysfunction by the distribution of pubic and axillary hair, since both are lost in cases of pituitary failure. In treatment the doctor must encourage the ventilation of feelings of aggression and hostility. The value of depth psychotherapy remains questionable.

HYPOGLYCEMIA WITHOUT WARNING SYMPTOMS. M. C. Balodimos, M.D., and H. F. Root, M.D., *J.A.M.A.*, 171:261-266 1959.

Completely unheralded reactions may appear in patients who had symptoms that were formerly easily recognizable as hypoglycemia. Possible explanations include cerebral vascular or metabolic changes, diabetic neuropathy affecting the autonomic nervous system, a metabolic abnormality in the availability or release of glucose, and epileptic equivalents.

THE HUSBAND-WIFE RELATIONSHIP IN CASES OF PUERPERAL BREAKDOWN. Peter Lomas, *Brit. J. Med. Psychol.*, 32:117-123, June 1959.

Certain features in the husband-wife relationship appear to have a specific relationship to puerperal breakdown. The family constellation

has been described as "loose-knit," with weak links between the present and the past generations. Most obvious is a lack of femininity on the part of the wife, usually accompanied by sexual frigidity, and a compensatory dominating attitude. The husband assumes a passive role. Psychoanalytically oriented psychotherapy revealed that not only in the wife's fantasies is the husband ineffectual, but that her wish for such a mate has influenced her selection.

The mother is likely to get into difficulties adjusting to the demands of a baby because of a deficiency in her maternal feeling. The typical situation is that the mother becomes preoccupied with the problems of her baby and loses her capacity to give emotional support to her husband. The husband finds new demands made on his self-reliance and also on his capacity to give emotional support to his wife; he is usually inadequate in this role. Owing to the loose-knit family organization, the mother is unable to draw support from others besides her husband.

THE GENERAL PRACTITIONER AND THE PSYCHIATRIST. Frederick Lemer, M.D., and Austin B. Kraabel, M.D. (Read at the annual meeting of the American Psychiatric Association, April 29, 1959.)

This report was based on the results of a questionnaire sent to 600 members of the Washington State Academy of General Practice. It was returned by 416.

Of the respondents, 60% felt that their psychiatric training in medical school was reasonably adequate. The respondents seemed to be well aware of the emotional component of illness. Sixty-nine per cent of those who replied said they would like to refer more of their patients to psychiatrists. They hesitated to do so because of expense (72%), because patients often resent this (43%), because of lack of available psychiatrists (32%) and because of failure of psychiatrists to have been of much help in the past (25%).

The following suggestions were made:

1. Undergraduate and postgraduate education should emphasize clinical demonstration of office type psychiatric cases as well as classical textbook cases.

2. More considerations should be given to the teaching of counseling techniques.

3. The most obvious need is for more psychiatrists and better techniques, so that a greater number of patients can be helped at less personal cost.

W. D.

Book Reviews

THE DYNAMICS OF INTERVIEWING: Theory, Technique, and Cases. By Robert L. Kahn and Charles F. Cannell. New York: John Wiley and Sons, Inc., 1959. 378 pgs. \$7.75.

This book begins with the discussion among three physicians who met to listen to recordings of interviews with the patients. Their consensus was that they had fallen into the habit of answering their own questions without really hearing what the patients had to say. Taking off from this point the two psychologists who were also present, who happen also to be on the faculty of the University of Michigan's Survey Research Center, have written a book especially useful to the physician who wants something more than a bag of tricks, but rather a basic understanding of what goes on between interviewer and respondent.

The essence of the interview is seen as interaction between two people, each seeking in various ways to influence the other. The authors analyze this interaction in terms of recent research and experience and deal with the obstacles, conscious and unconscious, rational and irrational, that tend to restrict and distort communication. Several types of interviews are discussed, but the medical interview is presented as probably the most complex and demanding, combining as it does the techniques of the information-seeker and the counselor.

Although the physician's knowledge of specific syndromes provides the background for formulating appropriate questions, how to obtain responses that include the minimum distortion is the main problem. Moreover, medical interviews, like those of the lawyer and the social worker, frequently do not permit advance planning; in the interaction proceeding from one response to another the interviewer must be in control without dominating the situation.

Chapters V and VI point out some of the most common dangers of both open and closed questions, especially in approaching material that may be difficult for the respondent to verbalize or inaccessible to him because of its embarrassing or threatening connotation. One requisite is that the language of the interviewer conform to the "shared vocabulary" of the respondent. This does not mean that the interviewer imitates the vocabulary of the respondent; what the patient wants from the doctor is language at the same time appropriate to his professional background and readily understood by the layman. But wording questions is by no means only a matter of vocabulary. Each person interprets what he hears according to his unique experience and in-

dividual viewpoint. Since the medical interview often puts the respondent in a position where he has much to win or lose, he may be expected to be ambivalent: on the one hand he wants the doctor to discover and remedy the cause of his difficulty; on the other he does not want anything discovered that will require radical or extensive treatment. Thus if in discussing a particular symptom the physician uses a choice of words or tone of voice that the patient interprets as suggestive of dire consequences, he is perhaps likely to repress his awareness of this symptom. Such behavior is less a matter of falsification than of bias in recollection and communication caused by emotional forces, in this instance mobilized for protection.

Dynamics of Interviewing is a well grounded analysis of the interview process based on the propositions that interviewing is a complex kind of communication and that it is a function of interpersonal relationships between two people. Emphasis is upon providing the psychological climate most conducive to unimpeded communication. Five transcripts of interviews from medicine, business, and social work with careful annotations go far to make the theoretical discussion concrete, to give body to the techniques presented, and in general to make the book satisfying and helpful.

Elizabeth Thoma
Rockville Centre, N. Y.

PSYCHOSOMATIC METHODS IN PAINLESS CHILDBIRTH. By L. Chertok. (Translated from the Second French Edition by D. Leigh.) Printed in England, 1959. 260 pgs. \$6.00.

This textbook is unique and worthy of being owned for frequent reference by the obstetrician, gynecologist, nurse-midwife, internist, geneticist, anthropologist, biologist, sociologist, psychologist, medical hypnotist, veterinarian, or rural general practitioner. To anyone interested in the science of reproduction, this book will provide an abundance of useful information. The reference to contemporary Russian research in psychophysiology would be difficult to match in any English-written text extant. The print is clear and easy to read, the pages are well bound, there is an author as well as a subject index, and the bibliography contains 587 references.

Among the many facts that we learn, for example, is that the phylogenetically higher animals manifest the suffering of parturition by restlessness and contortions, not by cries and groans. (From Eligulochvili.)

Recent studies on primitive people show that

primitive woman is no more favorably placed as regards painless childbirth than her civilized sister. (Velovski.) The methods (hypnosuggestive, psychoprophylactic and natural childbirth) utilized to produce analgesia in childbirth often diminish the pain in various degrees, and sometimes produce a complete absence of pain. The theories underlying the success of these methods are elaborated with special reference to Russian, British and American authors.

The role of the husband's participation in the psychosomatic methods in painless childbirth is emphasized by medical practitioners in France (Bourrel and Jeanson), in Belgium (Ransom), in Germany (Hellmann), in Great Britain (Read), and in the U.S.A. (Laird, Hogan and Thomas). In the Soviet Union, however, Zdravomyslov *et al.* oppose emphatically the husband's presence during the childbirth.

In summarizing the two main methods of non-pharmacological suppression of pain in childbirth (that of Read in Britain and of the Russian psychiatrist, Velovski), the author in a personal communication to this reviewer on June 11, 1959, stated, "the two methods are both effective; their theoretical bases are, however, unclear and controversial. The psychotherapeutic factor is the important mechanism in both methods."

Leo Wollman, M.D.
Brooklyn, N. Y.

EMOTIONAL FORCES IN THE FAMILY. Edited by Samuel Liebman, M.D., Philadelphia: J. B. Lippincott Co., 1959. 157 pgs. \$5.00.

This small volume is the fifth in a series based on the lectures given at the North Shore Hospital, Winnetka, Illinois. This present report is composed of papers presented by nine different authors and considers the emotional interrelationships between the patient and the individuals in his environment: his family, his in-laws, relatives, and boss. Each paper is essentially independent of the others, and a list of references is given after each. The whole is well indexed.

In the first paper, the following quote is worthy of attention: "A purely intellectual emphasis on orgasm has caused much sorrow in many marriages in which there was at first a belief in great mutual love and satisfaction. As we know from deeper analysis, orgasm is the result of a mutual relationship in which unconscious images from the past may have an inhibiting action." On page 15 Dr. Meerloo states: "Love-hunger is a neurotic sickness that may be acted out in various ways and may finally develop into a defensive compulsion to 'love,' which really means the need to be loved only." In chapter four Dr. Berman states: "Children function as a barom-

eter reflecting the psychodynamics of family life. Their roles are complex and structured to fulfill their own needs, the needs of the family and the needs of society. Therefore, children exhibit an infinitely complicated interplay of biologic, psychologic, family and cultural factors in which the child's role patterning represents a fusion of all these functions." In chapter seven, Dr. Marmor states: "The frenetic drive towards the acquisition of material goods is seen as one consequence of this psychological void, with the old Protestant Ethic and its emphasis on work, thrift and reward in the hereafter giving way to a new Age-of-Anxiety Ethic, in which leisure, spending and pleasure in the here-and-now have become the goals of living." Finally, in the last chapter, Dr. Kubie states that "the search for an answer will not begin until there is a frank initial acknowledgment that the problem exists."

This book discusses the development of the family, the role of the mother, father, and child, the impact of the in-laws and relatives, the impact of aging and other social factors, and the disintegrating impact of modern life. It is well worthy of a few hours reading.

James L. McCartney, M.D.
Garden City, N. Y.

SCHIZOPHRENIA. By Manfred Sakel, M.D. New York: Philosophical Library. 334 pgs. \$5.00.

Dr. Sakel has gone down in medical annals as the discoverer of the insulin shock treatment of schizophrenia. It is not surprising that his last book was one on schizophrenia. In it he describes how he came to discover insulin shock as a therapy and its early uses in the treatment of schizophrenia.

In the first section of the book he discusses the history and description of schizophrenia; its symptoms, diagnosis and prognosis. The final section of the book is devoted to Sakel's clinical description of his treatment with full medical data and detailed records of many case histories.

While this book does not take into account the more recent views of Heath, Arieti and others, it is nevertheless of historical interest, particularly to physicians who are curious about medico-historical matters.

Edward Podolsky, M.D.
Brooklyn, N. Y.

A HANDBOOK OF ABNORMAL PSYCHOLOGY. By Richard Nice and Edward Podolsky, M.D. New York: Philosophical Library, Inc. 1959. 245 pgs. \$6.00.

This book is a non-technical presentation and survey of the various manifestations of abnormal behavior patterns, together with a detailed inter-

pretation of the therapeutic measures available. Case histories are given which represent the most common forms of mental disease, with particular attention to the psychological relationship between delinquency, drug addiction and the sexual offender. A glossary of psychological and psychiatric terminology, as used by the different schools, is included. This book will prove interesting to the general medical reader.

Edward Podolsky, M.D.

Brooklyn, N. Y.

INSULIN TREATMENT IN PSYCHIATRY. Edited by Max Rinkel, M.D., and Harold E. Himwich, M.D. New York: Philosophical Library. 386 pgs. \$5.00.

This book contains the proceedings of the International Conference on Insulin Treatment in Psychiatry, held at the New York Academy of Medicine, October 24 to 25, 1958. Essentially this book presents a comprehensive evaluation of the current status of insulin therapy in psychiatry.

Following Sakel's introduction of insulin shock some thirty years ago, many views have been expressed on the value of insulin shock in the treatment of mental disease. In this conference, the views of both proponents and opponents are aired. These will prove of great interest to all physicians interested in the treatment of schizophrenia. This is a book worth reading.

Edward Podolsky, M.D.

Brooklyn, N. Y.

A MAN FOR EVERY WOMAN. By Richard H. Klemer, Ph.D. New York: The Macmillan Co., 1959. 193 pgs.

When a 17 year old girl approves of the advice of a grown-up—this is something!

Dr. Klemer says that there is a man for every woman; my father says there is a proper bait for every fish. Dr. Klemer says that if a girl is willing to do a bit of self-analyzing before she starts, the creel can be filled. My father says that this robs the poor fish of any hope—particularly if you can think like a fish, tempt like a fish, and act like a fish. Fortunately, according to this interesting do-it-yourself manual of Dr. K's, this not only is possible, but is the successful formula of such do-it-yourselfers as Cleopatra, Marilyn and Brigitte. It plays merry thunder with the female ego if you don't get smart.

Although this book is written largely to be read by women of college age and over, it gives a great deal of insight into the primary steps of finding a man which, of course, is nonetheless interesting to teenage girls who are beginning to date. Whether a girl is aware of it or not, she subconsciously sizes up each of her dates to try

to determine if he is marriage material. This is all very fine except that she has either forgotten or ignored the fact that he too may be carefully looking her over with the same idea in mind. She has neglected the most important part of securing a potential husband—that of putting her own needs temporarily aside while meeting his. She must somehow acquire the poise and self-assurance to let others appear right when they are wrong; to be able to strike up a mutually interesting conversation; to not be hurt if the man she has courageously asked to dance declines because he does not know how to dance. In other words, "in the long run, self-assurance and selflessness are one and the same thing."

Writing in an informal and yet modestly professional style, Dr. Klemer succeeds in discussing his subject in that there really seems to be "a man for every woman, but after all, is he worth it?"

"Suzie"

(Reprinted from *West. J. of S. G. & O.*)

BATTLE FOR THE MIND. By William Sargant, M.D. New York: Doubleday. 263 pgs. \$4.50.

Dr. William Sargant has written a well-documented book which raises the fearsome question—"are our minds our own?"—and answers the question pretty much in the negative.

The first part of the book is a refresher course on the conditioned reflex with special reference to Pavlov and his experiments on dogs. After showing that the brain of both man and dog can be conditioned, the author says that the conditioned processes can be broken down and other brain patterns substituted. This conversion process is called education, confession, brain-washing, indoctrination, training or treatment depending upon whether it is done by teachers, police, dictators, army sergeants, or psychiatrists. This is, then, the battle for the mind. Reconditioning of the mind may be achieved through hypnotic stimuli, fear, emotional shock, anger, excitement, or the use of repetitive situations (slogans, lies, advertisements, etc.).

To illustrate how emotional shock is used to produce brain conversion Sargant discusses the use of amytal intravenously or the use of ether (in the British army) following combat neurosis. These drugs would relax the brain sufficiently to bring back a flood of traumatic memories. When the drug released the memories, but produced very little affect, the results were generally not good. Emotional release brought better results. To round out further the use of emotional shock in the process of brain conversion the author cites the use of shock treatments, both insulin and electric, and the use of emotional episodes during psychotherapy.

A description of the techniques of religious conversions follows. In these types of conversions Dr. Sargant demonstrates the use of fear, emotional shock and hypnotic suggestion. He traces the history of religious conversion from the middle ages to Billy Graham. There is particular emphasis on John Wesley of England, in the 1730's, the first of the "hell and brimstone preachers."

An interesting but frightening parallelism was brought out in his chapters on religion. He discusses the Brotherhood of Flagellants, a peasant group, which arose during the thirteenth century following the Black Plague. The Brotherhood traveled through Germany, calling on the Catholics to return to the ways of God and so avoid a recurrence of the plague. They worked up group excitement by singing, rhythmic chanting and torchlight parades. This group unfortunately, came to be controlled by the wealthier classes, who found it convenient to blame the Jews, not only for the persecution of Christ, but also for poisoning the wells and causing the Plague. The appearance of the 'Brotherhood' (sic!) became the signal for the slaughter of the Jews. In Mainz alone, 12,000 Jews were killed. Hitler used the same technique for converting the Germans to the Nazi faith—rhythmic chanting, torchlight parades, and a sacrificial scapegoat. Whether the Crusaders raped and pillaged, whether the Catholics murdered French Huguenots or whether the Protestants, under Cromwell, killed Irish Catholics, or whether Spanish Inquisitors tortured Jews, it was always the "will of God." The perpetrators had been brainwashed into believing that to murder was to follow the dictates of God.

When we think of brain-washing we think of Communist China or the Soviet Union. Not necessarily so, points out Dr. Sargant. In our country brain-washing was an accomplished art among the Puritans in New England, from the 1730's onward. They used fear, guilt, emotional shock and conflict. Anxiety and guilt can keep the less faithful (either to a religious or to a political doctrine) in a state of physiological tension and make them dependent on their leaders for help and guidance.

Dr. Sargant spends a very profitable chapter on police confessions. He points out how much more effective than the traditional "third degree" is the bright light burning overhead, the endless hypnotic suggestion of the same question, the withholding of a glass of water, the denial of a person's need to empty his bladder, the loss of sleep! All this is effective and is done without breaking the skin. Not only is the victim brain-washed into believing that he com-

mitted the crime, but his tormentor gets to believe it also.

The author has deliberately limited his book to a mechanistic approach so that the physiological aspects of conversion can be adequately studied. Dr. Sargant suggests further study: biochemical, electrical, and psychoanalytical studies of brain function.

It is a difficult book to write since he is a David attacking Goliaths—police, religions, political parties and ideologies. Yet it is done with intellectual honesty and with good taste. *The Battle for the Mind* can be read with profit by the psychologically oriented professions as well as the laity.

Abraham I. Beacher, M.D.

Brooklyn, N. Y.

DIAGNOSIS AND THERAPY OF THE DEPRESSIVE STATES. By Paul Kielholz, M.D., *Acta Psychosomatica, Documenta Geigy, No. 1.*

The author reviews the depressed patients requiring treatment at the University Psychiatric Clinic, Basle, between 1920 and 1957. An attempt is made to evaluate both the old as well as the new methods of treatment. The differential diagnosis of various types of depression is pointed out to be exceedingly difficult, but is nevertheless attempted.

Reactive depressions are defined as those emotional states of sadness that follow a painful experience. Exhaustive depression follows prolonged or repeated affective stimuli in introverted personalities. Here psychosomatic symptoms are common, resulting in autonomic disturbances which lead the patient into ever-increasing self-observation. Neurotic depression is associated with anxiety and compulsion neuroses. Endogenous depression (melancholias) are defined as periodic displacements of affect in the cyclical type of personality. Hereditary factors are generally recognized in this latter type, as is the pyknic type of constitution, but the author points out that the population of Basle has "less pyknics" than other areas and can thus account for the smaller number in the Basle series of melancholias. In contrast to some American analysts, European authors flatly deny that pure psychogenesis of melancholia exists. Involutional depressions are regarded as a distinct entity. Most characteristic is the absence of a hereditary taint of manic-depressive psychosis, and the greater frequency of schizophrenic and schizoid personalities in close relatives. The author points up the greater incidence in females of this type of depression. The fact that the heaviest incidence is between 51 and 60 years, rather than at the climacteric, leads the author to believe that it cannot be primarily ascribed to regressive sex-

ual processes. In the involuntional depressions, somatic symptoms and anxiety are concomitant features.

The assessment of the risk of suicide is one of the most difficult tasks. Death wishes, often disguised, must be discussed. The following factors were noted to increase the rate of suicide: 1) family history of suicide, 2) earlier attempts, 3) sudden attacks of anxiety, 4) preparatory actions, 5) periods of activity during the depression where the patient is sufficiently mobilized to make the decision, 6) lack of occupation or feeling of being useful, 7) feelings of isolation, 8) lack of religious ties, 9) loss of earning power and savings, 10) severe physical illness with prolonged sleep disturbance.

In the treatment of depression, the author feels that reactive depressions belong in the domain of psychotherapy. If prolonged, he recommends the use of Tofranil; with severe concomitant anxiety, he adds a neuroleptic drug. It is pointed out that patients with severe depression should not be sent away on a holiday. The quiet and inactivity may deepen the anxiety and fear of failure. Electroshock therapy cuts short an endogenous depression in 40% of the patients if they are in their first or second attacks. Neuroleptic drugs are contraindicated in patients with depression and inhibition. Tofranil is particularly valuable in melancholics with anxiety and inhibition. In 60% of cases the author reports a definite lifting of the depression in 3 to 21 days. If the drug is stopped before the depression is over, a recurrence is seen, so that a maintenance dose becomes necessary. In resistant patients, a combination of drug and electroshock has proved helpful. In involuntional depression, the

more marked the endogenous tone, the more impressive the results with Tofranil, either alone or in combination with electroshock therapy. In those with a marked paranoid trend, there is a better response to the neuroleptic drugs.

W. D.

DOCTOR PURGATORY. By Jan Marks, M.D. New York: The Citadel Press, 224 pgs. \$3.95.

This book is an autobiography—the story of a young physician who struggled to conquer drug addiction. His first encounter with Demerol was during an acute attack of gout; soon he was powerless to resist the nirvana-like peace that followed successive doses. His story relates his difficulties in breaking the hold of the drug; it traces his downward path through prisons, private and state hospitals, electroshock therapy, hypnosis and two commitments at the U.S.P.H.S. Hospital at Lexington, Kentucky.

He describes his inner turmoil with merciless frankness. His description of the "Hosprisin" at Lexington is indicative of his feelings about his period of hospitalization. His objectivity in relating the events leads to easy readability, yet the story is replete with factual information dealing with the personality and behavior of fellow addicts in addition to himself. Most understanding is his plea for a more humane treatment for the addict caught in the web of circumstances.

His courage in dealing with this self-incriminating material and his eventual triumph over addiction is a fascinating story. His obvious emotional maturation is evident when he is frank enough to admit that he is not sure if his newly found normal existence is just a reprieve.

W. D.

THE 1958 TRANSACTIONS

Some copies of the Transactions of the 1958 meeting of the Academy are still available. This meeting covered the "Psychosomatic Aspects of Internal Medicine." The original selling price was only \$3 because much of the cost of financing was borne by sponsors; it is now reduced to \$2 per single copy and \$15 for 10 copies. Here is an opportunity, while the copies last, to plant one or more in your hospital libraries as well as in the offices and homes of colleagues who may be still ambivalent to their need for knowledge in psychosomatic medicine.

Checks should be drawn to the order of the Academy of Psychosomatic Medicine and sent to the Editor at 1921 Newkirk Ave., Brooklyn 26, N. Y.